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|---------------|--------------------------------------|----------------------|--------------|------------|
| Trading name: | <b>PERIODIC ACID, 0.8 % SOLUTION</b> |                      |              |            |
| Product code: | PK08-OT-X**                          | Date of compilation: | 03 July 2019 | Version: 3 |

| SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING |                                                                               |                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1.                                                                             | Product identifier                                                            |                                                                                                                                                                                                               |
|                                                                                  | Trading name:                                                                 | PERIODIC ACID, 0.8 % SOLUTION                                                                                                                                                                                 |
|                                                                                  | Chemical name:                                                                | -                                                                                                                                                                                                             |
|                                                                                  | Catalogue number:                                                             | PK08-OT-X**                                                                                                                                                                                                   |
| 1.2.                                                                             | Relevant identified uses of the substance or mixture and uses advised against |                                                                                                                                                                                                               |
|                                                                                  | Uses:                                                                         | For use with special staining kits.                                                                                                                                                                           |
|                                                                                  | Uses advised against:                                                         | Only the identified uses are advised.                                                                                                                                                                         |
|                                                                                  | Reason why uses advised against:                                              | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes |
| 1.3.                                                                             | Details of the supplier of the safety data sheet                              |                                                                                                                                                                                                               |
|                                                                                  | Supplier:                                                                     | BioGnost Ltd.                                                                                                                                                                                                 |
|                                                                                  | Address:                                                                      | Medjugorska 59, Zagreb                                                                                                                                                                                        |
|                                                                                  | Telephone number:                                                             | +385 1 2409997                                                                                                                                                                                                |
|                                                                                  | Fax no.:                                                                      | +385 1 2404039                                                                                                                                                                                                |
|                                                                                  | e-mail of competent person:                                                   | <a href="mailto:msds@biognost.hr">msds@biognost.hr</a>                                                                                                                                                        |
|                                                                                  | National contact:                                                             | -                                                                                                                                                                                                             |
| 1.4.                                                                             | Emergency telephone number                                                    |                                                                                                                                                                                                               |
|                                                                                  | National Protection and Rescue Directorate:                                   | 112                                                                                                                                                                                                           |
|                                                                                  | Medical information:                                                          | +385 1 2348 342                                                                                                                                                                                               |
|                                                                                  | Other information:                                                            | -                                                                                                                                                                                                             |

| SECTION 2 HAZARDS INFORMATION                                      |                                                             |                               |
|--------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------|
| 2.1.                                                               | Classification of the substance or mixture                  |                               |
| 2.1.1.                                                             | Classification (REGULATION (EC) No. 1272/2008 (CLP))        |                               |
|                                                                    | Hazard class and category code:                             | Hazard statements*:           |
|                                                                    | Not identified as hazardous substance.                      | -                             |
| 2.1.2.                                                             | Additional information                                      |                               |
|                                                                    | -                                                           |                               |
| *For full text of Hazard- and EU Hazard-statements: see Section 16 |                                                             |                               |
| 2.2.                                                               | Classification according to EC Directive Nr. 1272/2008 CLP) |                               |
|                                                                    | Product identification:                                     | PERIODIC ACID, 0.8 % SOLUTION |
|                                                                    | Identification number:                                      | -                             |
|                                                                    | Authorization no.:                                          | -                             |
|                                                                    | Hazard pictograms:                                          | -                             |
|                                                                    | Signal word:                                                | -                             |

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|      |                           |   |
|------|---------------------------|---|
|      | Hazard statements:        | - |
|      | Precautionary statements: | - |
|      | Further information:      | - |
| 2.3. | Other hazards             |   |
|      | -                         |   |

| SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS |                          |                                |                        |                                                                   |
|--------------------------------------------------|--------------------------|--------------------------------|------------------------|-------------------------------------------------------------------|
| CAS/<br>EC/<br>Index no.                         | REACH<br>Registration No | Weight % content<br>(or range) | Identification<br>name | Classification according to Regulation<br>(EC) No 1272/2008 (CLP) |
| -                                                | -                        | -                              | -                      | -                                                                 |

| SECTION 4 FIRST AID MEASURES |                                                             |                                                                                                                                                                                                                                                   |
|------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1.                         | Description of first aid measures                           |                                                                                                                                                                                                                                                   |
|                              | General notes:                                              | -                                                                                                                                                                                                                                                 |
|                              | Following inhalation:                                       | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. If breathing becomes erratic or it stops, immediately apply artificial respiration (other than mouth-to-mouth) and contact a physician. |
|                              | Following skin contact:                                     | Remove contaminated clothing. Immediately wash with plenty of water and soap. Seek medical assistance if the symptoms of irritation remain.                                                                                                       |
|                              | Following eye contact:                                      | Rinse out with plenty of water with the eyelid held wide open using clean fingers. If the symptoms remain, immediately call a physician.                                                                                                          |
|                              | Following ingestion:                                        | Do not induce vomiting. Make the afflicted person drink a glass of water. If spontaneous vomiting occurs, wash the mouth with water, then make the person drink 100-200 ml of water and seek medical attention.                                   |
|                              | Self-protection of the first aider:                         | Treat symptomatically.                                                                                                                                                                                                                            |
| 4.2.                         | Most important symptoms and effects, both acute and delayed |                                                                                                                                                                                                                                                   |
|                              | Following inhalation:                                       | Inhalation of large amounts of vapors in inadequately ventilated perimeter may cause coughing, sneezing, headache and nausea.                                                                                                                     |
|                              | Following skin contact:                                     | Slight irritation. After short exposure, resorption effects are not likely. Long-term exposure may cause drying, cracking and tingling sensation of skin.                                                                                         |
|                              | Following eye contact:                                      | Direct eye contact may cause slight to moderate irritation, lacrimation and burning sensation.                                                                                                                                                    |

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|      |                                                                            |                                                                                                                                                                                                                                                                                                          |
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|      | Following ingestion:                                                       | Swallowing may cause irritation of mucosa, tingling sensation in the mouth, burning sensation; higher levels of concentration may cause nausea, abdominal pain and vomiting. In case of vomiting, aspiration causes coughing, difficult breathing. Higher levels of concentration may cause suffocation. |
| 4.3. | Indication of any immediate medical attention and special treatment needed |                                                                                                                                                                                                                                                                                                          |
|      | -                                                                          |                                                                                                                                                                                                                                                                                                          |

| SECTION 5 FIREFIGHTING MEASURES |                                                                                                                                                                |                                                                                                             |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 5.1.                            | Extinguishing media                                                                                                                                            |                                                                                                             |
|                                 | Suitable extinguishing media:                                                                                                                                  | Small fire - water spray, dry powder, CO <sub>2</sub><br>Large fire - water spray or alcohol-resistant foam |
|                                 | Unsuitable extinguishing media:                                                                                                                                | water jet                                                                                                   |
| 5.2.                            | Special hazards arising from the substance or mixture                                                                                                          |                                                                                                             |
|                                 | Hazardous combustion products:                                                                                                                                 | No information available                                                                                    |
| 5.3.                            | Advice for firefighters                                                                                                                                        |                                                                                                             |
|                                 | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing. Cool closed containers exposed to fire with water spray or vapor. |                                                                                                             |
| 5.4.                            | Additional information                                                                                                                                         |                                                                                                             |
|                                 | Remove sources of heat and ignition.<br>Do not contaminate the environment with extinguishing media.                                                           |                                                                                                             |

| SECTION 6 ACCIDENTAL RELEASE MEASURES |                                                                                                                                                         |                                                                                                                                                          |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1.                                  | Personal precautions, protective equipment and emergency procedures                                                                                     |                                                                                                                                                          |
| 6.1.1.                                | For non-emergency personnel                                                                                                                             |                                                                                                                                                          |
|                                       | Protective equipment:                                                                                                                                   | Use personal protective equipment (see Section 8).                                                                                                       |
|                                       | Accident prevention methods:                                                                                                                            | Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke. |
|                                       | Emergency procedures:                                                                                                                                   | Mark the area using proper signs.                                                                                                                        |
| 6.1.2.                                | For emergency responders:                                                                                                                               |                                                                                                                                                          |
|                                       | Wear protective equipment (see Section 8).                                                                                                              |                                                                                                                                                          |
| 6.2.                                  | Environmental precautions:                                                                                                                              |                                                                                                                                                          |
|                                       | Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112. |                                                                                                                                                          |
| 6.3.                                  | Methods and material for containment and cleaning up                                                                                                    |                                                                                                                                                          |
| 6.3.1.                                | Bundling, covering of drains; capping procedures:                                                                                                       | Sand or clay barriers.                                                                                                                                   |

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| 6.3.2. | Cleaning up:                | Where possible, the substance can be absorbed by using inflammable material (sand, diatomaceous earth, vermiculite). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water. |
| 6.3.3. | Other information:          | -                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 6.4.   | Reference to other sections |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|        | -                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| SECTION 7 HANDLING AN STORAGE |                                                                                                  |                                                                                                                                                                             |
|-------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1.                          | Precautions for safe handling                                                                    |                                                                                                                                                                             |
| 7.1.1.                        | Protection measures                                                                              |                                                                                                                                                                             |
|                               | Measures to prevent fire:                                                                        | Keep away from sources of heat and ignition. Do not smoke.                                                                                                                  |
|                               | Measures to prevent aerosol and dust generation:                                                 | Secure proper ventilation.                                                                                                                                                  |
|                               | Measures to protect the environment:                                                             | Prevent spilling into the sewage system and waterways.                                                                                                                      |
|                               | Other measures:                                                                                  | -                                                                                                                                                                           |
| 7.1.2.                        | Advice on general occupational hygiene:                                                          |                                                                                                                                                                             |
|                               | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. |                                                                                                                                                                             |
| 7.2.                          | Conditions for safe storage, including any incompatibilities                                     |                                                                                                                                                                             |
|                               | Technical measures and storage conditions:                                                       | Keep in tightly closed and upright set containers in a well ventilated storage rooms, and away from sources of heat, sunlight, and other incompatible substances.           |
|                               | Packaging materials:                                                                             | Manufacturer's original packaging.                                                                                                                                          |
|                               | Requirements for storage rooms and vessels:                                                      | Keep away from food and drink. Keep the containers tightly closed.                                                                                                          |
|                               | Advices for storage equipment:                                                                   | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |
|                               | Further information on storage conditions:                                                       | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9). |
| 7.3.                          | Specific end use(s)                                                                              |                                                                                                                                                                             |
|                               | Recommendations:                                                                                 | -                                                                                                                                                                           |
|                               | Industrial sector specific solutions:                                                            | -                                                                                                                                                                           |

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| SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION                      |                    |                                                      |                      |                          |
|----------------------------------------------------------------------|--------------------|------------------------------------------------------|----------------------|--------------------------|
| 8.1.                                                                 | Control parameters |                                                      |                      |                          |
| Substance                                                            | CAS No             | Occupational exposure limit values/short term values |                      | Biological limit values  |
|                                                                      |                    | ppm                                                  | mg/m <sup>3</sup>    |                          |
| -                                                                    | -                  | -                                                    | -                    | No information available |
|                                                                      |                    |                                                      |                      |                          |
| Substance name:                                                      | -                  |                                                      |                      |                          |
| EC No:                                                               | -                  | CAS No:                                              | -                    |                          |
| DNEL                                                                 |                    |                                                      |                      |                          |
| Industrial                                                           |                    |                                                      |                      |                          |
| Route of exposure:                                                   | Acute effect local | Acute effect systemic                                | Chronic effect local | Chronic effect systemic  |
| Oral                                                                 | -                  | -                                                    | -                    | -                        |
| Inhalation                                                           | -                  | -                                                    | -                    | -                        |
| Dermal                                                               | -                  | -                                                    | -                    | -                        |
| Critical physical parameters: solubility, flammability, corrosivity: |                    |                                                      | -                    |                          |
| Consumer                                                             |                    |                                                      |                      |                          |
| Route of exposure:                                                   | Acute effect local | Acute effect systemic                                | Chronic effect local | Chronic effect systemic  |
| Oral                                                                 | -                  | -                                                    | -                    | -                        |
| Inhalation                                                           | -                  | -                                                    | -                    | -                        |
| Dermal                                                               | -                  | -                                                    | -                    | -                        |
| PNEC                                                                 |                    |                                                      |                      |                          |
| Environmental protection target                                      |                    | PNEC                                                 |                      |                          |
| Fresh water                                                          |                    | No information available                             |                      |                          |
| Freshwater sediments                                                 |                    | No information available                             |                      |                          |
| Marine water                                                         |                    | No information available                             |                      |                          |
| Marine sediments                                                     |                    | No information available                             |                      |                          |
| Food chain                                                           |                    | No information available                             |                      |                          |
| Microorganisms in sewage treatment                                   |                    | No information available                             |                      |                          |
| Soil (agricultural)                                                  |                    | No information available                             |                      |                          |
| Air                                                                  |                    | No information available                             |                      |                          |
|                                                                      |                    |                                                      |                      |                          |
| 8.2.                                                                 | Exposure controls  |                                                      |                      |                          |

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| 8.2.1.   | Engineering measures                                                           |                                                                                                                                                                                                      |
|          | Substance/mixture related measures to prevent exposure during identified uses: | Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.                                                                            |
|          | Structural measures to prevent exposure:                                       | No information available                                                                                                                                                                             |
|          | Organisational measures to prevent exposure:                                   | Organization of work in order to reduce other worker's influence during work process.                                                                                                                |
|          | Technical measures to prevent exposure:                                        | Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.                                                                                             |
| 8.2.2.   | Personal protection equipment                                                  |                                                                                                                                                                                                      |
| 8.2.2.1. | Eye and face protection:                                                       | Safety glasses that stick to face (preventing splashing) (EN 166) or visor.                                                                                                                          |
| 8.2.2.2. | Skin protection                                                                |                                                                                                                                                                                                      |
|          | Hand protection:                                                               | Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374.<br>Glove material: nitrile rubber<br>Glove thickness: ≥0.50 mm<br>Break through time: >480 min             |
|          | Other skin protection:                                                         | Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 13034), and shoes that cover the entire foot (EN 10335).                                                      |
| 8.2.2.3. | Respiratory protection:                                                        | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI. |
| 8.2.2.4. | Thermal hazards:                                                               | No information available                                                                                                                                                                             |
| 8.2.3.   | Environmental exposure controls                                                |                                                                                                                                                                                                      |
|          | Substance/mixture related measures to prevent exposure:                        | See Section 6                                                                                                                                                                                        |
|          | Structural measures to prevent exposure:                                       | Use modern equipment.                                                                                                                                                                                |
|          | Organisational measures to prevent exposure:                                   | Adapt the work process to the required working conditions of the workplace.                                                                                                                          |
|          | Technical measures to prevent exposure:                                        | See Section 6                                                                                                                                                                                        |

| SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES |                                                       |            |                          |
|--------------------------------------------|-------------------------------------------------------|------------|--------------------------|
| 9.1.                                       | Information on basic physical and chemical properties |            |                          |
|                                            |                                                       | Value      | Method                   |
|                                            | Physical state:                                       | liquid     | No information available |
|                                            | Color:                                                | colourless | No information available |

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| Odor:                                             | no odor                  | No information available |
| Odor threshold:                                   | No information available | No information available |
| pH:                                               | No information available | No information available |
| Melting point / freezing point:                   | No information available | No information available |
| Initial boiling point and boiling range:          | No information available | No information available |
| Flash point:                                      | No information available | No information available |
| Evaporation rate:                                 | No information available | No information available |
| Flammability (solid, gas):                        | No information available | No information available |
| Upper/lower flammability or explosive limits:     | No information available | No information available |
| Vapor pressure:                                   | No information available | No information available |
| Vapor density:                                    | No information available | No information available |
| Relative density:                                 | No information available | No information available |
| Bulk density:                                     | No information available | No information available |
| Solubility(ies):                                  | Soluble in water (20 °C) | No information available |
| Partition coefficient: n-octanol/water (log Kow): | No information available | No information available |
| Auto-ignition temperature:                        | No information available | No information available |
| Decomposition temperature:                        | No information available | No information available |
| Viscosity:                                        | No information available | No information available |
| Explosive properties:                             | No information available | No information available |
| Oxidising properties:                             | No information available | No information available |
| 9.2.                                              | Other information        |                          |
|                                                   | -                        |                          |

| SECTION 10 STABILITY AND REACTIVITY |                                     |                                                                                          |
|-------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------|
| 10.1.                               | Reactivity:                         | See subsections 10.3 through 10.5.                                                       |
| 10.2.                               | Chemical stability:                 | The product is chemically stable under standard ambient conditions of storing and using. |
| 10.3.                               | Possibility of hazardous reactions: | With strong oxidants, sodium-hydroxide, sulfuric acid, aluminum.                         |
| 10.4.                               | Conditions to avoid:                | Sources of heat, sparks, and ignition.                                                   |
| 10.5.                               | Incompatible materials:             | Aluminum.                                                                                |
| 10.6.                               | Hazardous decomposition products:   | No information available.                                                                |

| SECTION 11 TOXICOLOGICAL INFORMATION |                                      |
|--------------------------------------|--------------------------------------|
| 11.1.                                | Information on toxicological effects |
|                                      | Acute toxicity:                      |

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| Route of exposure:   | Method                   | Species | Effective dose<br>LD <sub>50</sub> /LC <sub>50</sub> or<br>ATE <sub>mixture</sub> | Exposure time | Results |
|----------------------|--------------------------|---------|-----------------------------------------------------------------------------------|---------------|---------|
| Oral exposure:       | No information available | -       | LD <sub>50</sub>                                                                  | -             | -       |
| Dermal exposure:     | No information available | -       | LD <sub>50</sub>                                                                  | -             | -       |
| Inhalation exposure: | No information available | -       | LC <sub>50</sub>                                                                  | -             | -       |

**Specific target organ toxicity – single exposure (STOT SE):**

|                      | Specific effects         | Target organ             | Note |
|----------------------|--------------------------|--------------------------|------|
| Oral exposure:       | No information available | No information available | -    |
| Dermal exposure:     | No information available | No information available | -    |
| Inhalation exposure: | No information available | No information available | -    |

**Respiratory irritation:** No information available

**Irritation and corrosion**

|                  | Exposure time | Species | Evaluation | Method | Note |
|------------------|---------------|---------|------------|--------|------|
| Skin irritation: | -             | rabbit  | -          | -      | -    |
| Eye irritation:  | -             | rabbit  | -          | -      | -    |

**Sensitization**

|                      |                          |
|----------------------|--------------------------|
| Dermal exposure:     | No information available |
| Inhalation exposure: | No information available |

**Symptoms related to the physical, chemical and toxicological characteristics**

|                      |                                                                                                                                                                                                                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oral exposure:       | Swallowing may cause irritation of mucosa, tingling sensation in the mouth, burning sensation; higher levels of concentration may cause nausea, abdominal pain and vomiting. In case of vomiting, aspiration causes coughing, difficult breathing. Higher levels of concentration may cause suffocation. |
| Dermal exposure:     | Slight irritation. After short exposure, resorption effects are not likely. Long-term exposure may cause drying, cracking and tingling sensation of skin.                                                                                                                                                |
| Inhalation exposure: | Inhalation of large amounts of vapors in inadequately ventilated perimeter may cause coughing, sneezing, headache and nausea.                                                                                                                                                                            |
| Eye exposure:        | Direct eye contact may cause slight to moderate irritation, lacrimation and burning sensation.                                                                                                                                                                                                           |

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| Repeated dose toxicity (subacute, subchronic, chronic)        |                          |                          |                          |                          |                          |      |
|---------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
|                                                               | Dose                     | Exposure time            | Species                  | Method                   | Evaluation               | Note |
| Subacute oral                                                 | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute dermal                                               | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute inhalation                                           | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic oral                                               | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic dermal                                             | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic inhalation                                         | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic oral                                                  | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic dermal                                                | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic inhalation                                            | No information available | No information available | No information available | No information available | No information available | -    |
| Specific target organ toxicity – repeated exposure (STOT RE): |                          |                          |                          |                          |                          |      |
|                                                               | Specific effects         |                          | Target organ             |                          | Note                     |      |
| Subacute oral                                                 | No information available |                          | No information available |                          | -                        |      |
| Subacute dermal                                               | No information available |                          | No information available |                          | -                        |      |
| Subacute inhalation                                           | No information available |                          | No information available |                          | -                        |      |
| Subchronic oral                                               | No information available |                          | No information available |                          | -                        |      |
| Subchronic dermal                                             | No information available |                          | No information available |                          | -                        |      |
| Subchronic inhalation                                         | No information available |                          | No information available |                          | -                        |      |
| Chronic oral                                                  | No information available |                          | No information available |                          | -                        |      |

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| Chronic dermal     | No information available                                           | No information available                                                  | - |
| Chronic inhalation | No information available                                           | No information available                                                  | - |
|                    |                                                                    |                                                                           |   |
|                    | CMR effects (carcinogenicity, mutagenicity, reproductive toxicity) |                                                                           |   |
|                    | Carcinogenicity:                                                   | Current studies on test animals did not indicate carcinogenic effects.    |   |
|                    | Mutagenicity <i>in-vitro</i> :                                     | Current <i>in vitro</i> tests did not indicate mutagenic effects.         |   |
|                    | Genotoxicity:                                                      | No information available                                                  |   |
|                    | Mutagenicity <i>in-vivo</i> :                                      | Current <i>in vivo</i> tests did not indicate mutagenic effects.          |   |
|                    | Germ cell mutagenicity:                                            | No information available                                                  |   |
|                    | Reproductive toxicity:                                             | No toxicity on reproductive organs was determined in reproductive organs. |   |
|                    |                                                                    |                                                                           |   |
|                    | Summary of evaluation of the CMR properties:                       | -                                                                         |   |
|                    |                                                                    |                                                                           |   |
| 11.2.              | Practical experiences:                                             |                                                                           |   |
|                    | Remarks relevant for classification:                               | No information available                                                  |   |
|                    | Other remarks:                                                     | No information available                                                  |   |
|                    |                                                                    |                                                                           |   |
| 11.3.              | General notes:                                                     |                                                                           |   |
|                    | -                                                                  |                                                                           |   |

| SECTION 12 ECOLOGICAL INFORMATION: |                  |               |                          |                          |            |      |
|------------------------------------|------------------|---------------|--------------------------|--------------------------|------------|------|
| 12.1.                              | Toxicity         |               |                          |                          |            |      |
| Acute toxicity                     | Dose             | Exposure time | Species                  | Method                   | Evaluation | Note |
| Fish                               | LC <sub>50</sub> | 96 hours      | No information available | No information available | -          | -    |
| Crustacea:                         | EC <sub>50</sub> | 48 hours      | No information available | No information available | -          | -    |
| Algae/aquatic plants               | IC <sub>50</sub> | 8 days        | No information available | No information available | -          | -    |
| Microorganisms                     | LC <sub>50</sub> | 72 hours      | -                        | -                        | -          | -    |
| Chronic toxicity                   | Dose             | Exposure time | Species                  | Method                   | Evaluation | Note |

|               |                                      |                      |              |          |   |  |
|---------------|--------------------------------------|----------------------|--------------|----------|---|--|
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| Product code: | PK08-OT-X**                          | Date of compilation: | 03 July 2019 | Version: | 3 |  |

|                      |                  |          |                          |                          |                          |   |
|----------------------|------------------|----------|--------------------------|--------------------------|--------------------------|---|
| Fish                 | LC <sub>50</sub> | 96 hours | No information available | No information available | No information available | - |
| Crustacea:           | EC <sub>50</sub> | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC <sub>50</sub> | 72 hours | No information available | No information available | No information available | - |
| Other organisms      | -                | -        | -                        | -                        | -                        | - |

## 12.2. Persistence and degradability

### Abiotic degradation

|              | Degradation half-lives   | Method                   | Evaluation               | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | -    |
| Fresh water  | No information available | No information available | No information available | -    |
| Air          | No information available | No information available | No information available | -    |
| Soil         | No information available | No information available | No information available | -    |

### Biodegradation

| % Degradation            | Time (days)              | Method                   | Evaluation               | Note                     |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
|                          |                          |                          |                          |                          |
|                          |                          |                          |                          |                          |

## 12.3. Bioaccumulative potential

### Partition coefficient: n-octanol/water (log Kow):

| Value | Concentration            | pH | °C | Method                   | Evaluation               | Note |
|-------|--------------------------|----|----|--------------------------|--------------------------|------|
| -     | No information available | -  | -  | No information available | No information available | -    |
|       |                          |    |    |                          |                          |      |
|       |                          |    |    |                          |                          |      |

### Bioconcentration factor (BCF)

| Value                    | Species                  | Method                   | Evaluation               | Note                     |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |

|               |                                      |                      |              |          |   |
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|                                                                |                                     |                          |                          |                          |                          |      |
|----------------------------------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
|                                                                |                                     |                          |                          |                          |                          |      |
|                                                                |                                     |                          |                          |                          |                          |      |
| Chronic ecotoxicity                                            |                                     |                          |                          |                          |                          |      |
| Value                                                          | Dose                                | Exposure time            | Species                  | Method                   | Evaluation               | Note |
| Chronic toxicity on fish                                       | LC <sub>50</sub>                    | No information available | No information available | No information available | No information available | -    |
| Chronic toxicity on crustacea ( <i>Daphnia</i> )               | EC <sub>50</sub>                    | No information available | No information available | No information available | No information available | -    |
|                                                                |                                     |                          |                          |                          |                          |      |
| 12.4. Mobility in soil                                         |                                     |                          |                          |                          |                          |      |
| Known or predicted distribution in environmental compartments: |                                     |                          |                          |                          |                          |      |
| No information available                                       |                                     |                          |                          |                          |                          |      |
| Surface tension:                                               |                                     |                          |                          |                          |                          |      |
|                                                                | Value                               | °C                       | Concentration            | Method                   | Note                     |      |
|                                                                | No information available            | No information available | No information available | No information available | -                        |      |
|                                                                |                                     |                          |                          |                          |                          |      |
|                                                                |                                     |                          |                          |                          |                          |      |
|                                                                |                                     |                          |                          |                          |                          |      |
| Adsorption / desorption                                        |                                     |                          |                          |                          |                          |      |
| Transport                                                      | A/D coefficient<br>Henry's constant |                          | log Kow                  | Evaporation rate         | Method                   | Note |
| Soil-water                                                     | No information available            | No information available | No information available | No information available | No information available | -    |
| Water-air                                                      | No information available            | No information available | No information available | No information available | No information available | -    |
| Soil-air                                                       | No information available            | No information available | No information available | No information available | No information available | -    |
|                                                                |                                     |                          |                          |                          |                          |      |
| 12.5. Results of PBT and vPvB assessment                       |                                     |                          |                          |                          |                          |      |
| No information available                                       |                                     |                          |                          |                          |                          |      |
|                                                                |                                     |                          |                          |                          |                          |      |
| 12.6. Other adverse effects                                    |                                     |                          |                          |                          |                          |      |
| No information available                                       |                                     |                          |                          |                          |                          |      |

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|                                           |                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SECTION 13 DISPOSAL CONSIDERATIONS</b> |                                                                                                                                                                                                                                                                                                                                       |
| 13.1.                                     | Waste treatment methods                                                                                                                                                                                                                                                                                                               |
| 13.1.1.                                   | Product/Packaging disposal:                                                                                                                                                                                                                                                                                                           |
|                                           | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.                                                                                                                                                                                                                            |
| 13.1.2.                                   | Waste codes/waste designations according to Law:                                                                                                                                                                                                                                                                                      |
|                                           | No information available                                                                                                                                                                                                                                                                                                              |
| 13.1.3.                                   | Waste treatment – relevant information:                                                                                                                                                                                                                                                                                               |
|                                           | No information available                                                                                                                                                                                                                                                                                                              |
| 13.1.4.                                   | Sewage disposal – relevant information:                                                                                                                                                                                                                                                                                               |
|                                           | Waste must not be disposed of into the sewage system.                                                                                                                                                                                                                                                                                 |
| 13.1.5.                                   | Other disposal recommendations:                                                                                                                                                                                                                                                                                                       |
|                                           | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur. |
| 13.1.6.                                   | Relevant Community provisions:                                                                                                                                                                                                                                                                                                        |
|                                           | -                                                                                                                                                                                                                                                                                                                                     |
| <b>SECTION 14 TRANSPORT INFORMATION</b>   |                                                                                                                                                                                                                                                                                                                                       |
|                                           | Transporting/shipment by road (ADR)                                                                                                                                                                                                                                                                                                   |
| UN number:                                | Not subject to transport regulations.                                                                                                                                                                                                                                                                                                 |
| UN proper shipping name:                  | -                                                                                                                                                                                                                                                                                                                                     |
| Transport hazard class(es):               | -                                                                                                                                                                                                                                                                                                                                     |
| Packing group:                            | -                                                                                                                                                                                                                                                                                                                                     |
| Environmentally hazardous:                | -                                                                                                                                                                                                                                                                                                                                     |
| Special precautions for user:             | -                                                                                                                                                                                                                                                                                                                                     |
|                                           | Transporting/shipment by rail (RID)                                                                                                                                                                                                                                                                                                   |
| UN number:                                | Not subject to transport regulations.                                                                                                                                                                                                                                                                                                 |
| UN proper shipping name:                  | -                                                                                                                                                                                                                                                                                                                                     |
| Transport hazard class(es):               | -                                                                                                                                                                                                                                                                                                                                     |

|               |                                      |                      |              |            |
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|                                                 |                                       |
|-------------------------------------------------|---------------------------------------|
| Packing group:                                  | -                                     |
| Environmentally hazardous:                      | -                                     |
| Special precautions for user:                   | -                                     |
| Inland waterway transport (ADN)                 |                                       |
| UN number:                                      | Not subject to transport regulations. |
| UN proper shipping name:                        | -                                     |
| Transport hazard class(es):                     | -                                     |
| Packing group:                                  | -                                     |
| Environmentally hazardous:                      | -                                     |
| Special precautions for user:                   | -                                     |
| Transporting/shipment by sea (IMDG)             |                                       |
| UN number:                                      | Not subject to transport regulations. |
| UN proper shipping name:                        | -                                     |
| Transport hazard class(es):                     | -                                     |
| Packing group:                                  | -                                     |
| Environmentally hazardous:                      | -                                     |
| Special precautions for user:                   | -                                     |
| Transporting/shipment by air (ICAO-TI/IATA-DGR) |                                       |
| UN number:                                      | Not subject to transport regulations. |
| UN proper shipping name:                        | -                                     |
| Transport hazard class(es):                     | -                                     |
| Packing group:                                  | -                                     |
| Environmentally hazardous:                      | -                                     |
| Special precautions for user:                   | -                                     |
| Further information:                            |                                       |
| -                                               |                                       |

| <b>SECTION 15 REGULATORY INFORMATION</b> |                                                                                                |
|------------------------------------------|------------------------------------------------------------------------------------------------|
| 15.1.                                    | Safety, health and environmental regulations/legislation specific for the substance or mixture |
|                                          | EU regulations                                                                                 |
|                                          | Authorization and/or restrictions of use                                                       |
|                                          | Authorizations: -                                                                              |
|                                          | Restrictions: -                                                                                |

|               |                                      |                      |              |            |
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|                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other EU regulations:                                                                                        | <p>EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council;</p> <p>The European Commission Regulation No. 453/2006 of 2010 on changes and amendments to the Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH);</p> <p>EC Regulation No. 2037/2000 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer;</p> <p>EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals;</p> <p>EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants;</p> <p>Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives</p> |
| Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| National legislation:                                                                                        | <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 15.2.                                                                                                        | Chemical safety assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                              | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| SECTION 16 Other information                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                         |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------|------|-----------------------------------------------|------------------|------------------|------------------|---------------------------|---------|--------------------------------------------------|
| 16.1.                                                                                                              | Indication of changes: -                                                                                                                                                                                                                                                                                                                                                                                                |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| 16.2.                                                                                                              | <p>Abbreviations and acronyms:</p> <table> <tr> <td>PBT</td><td>Stable, bioaccumulative and toxic</td></tr> <tr> <td>vPvB</td><td>Strongly stable and strongly bioaccumulative.</td></tr> <tr> <td>LD<sub>50</sub></td><td>Lethal dose, 50%</td></tr> <tr> <td>LC<sub>50</sub></td><td>Lethal concentration, 50%</td></tr> <tr> <td>STOT-SE</td><td>Specific target organ toxicity - single exposure</td></tr> </table> | PBT            | Stable, bioaccumulative and toxic | vPvB | Strongly stable and strongly bioaccumulative. | LD <sub>50</sub> | Lethal dose, 50% | LC <sub>50</sub> | Lethal concentration, 50% | STOT-SE | Specific target organ toxicity - single exposure |
| PBT                                                                                                                | Stable, bioaccumulative and toxic                                                                                                                                                                                                                                                                                                                                                                                       |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| vPvB                                                                                                               | Strongly stable and strongly bioaccumulative.                                                                                                                                                                                                                                                                                                                                                                           |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| LD <sub>50</sub>                                                                                                   | Lethal dose, 50%                                                                                                                                                                                                                                                                                                                                                                                                        |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| LC <sub>50</sub>                                                                                                   | Lethal concentration, 50%                                                                                                                                                                                                                                                                                                                                                                                               |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| STOT-SE                                                                                                            | Specific target organ toxicity - single exposure                                                                                                                                                                                                                                                                                                                                                                        |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| 16.3.                                                                                                              | Key literature references and source of data: -                                                                                                                                                                                                                                                                                                                                                                         |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| 16.4.                                                                                                              | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)                                                                                                                                                                                                                                                                                                 |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| <table> <tr> <th>Classification</th><th>Classification procedure</th></tr> <tr> <td>-</td><td>-</td></tr> </table> |                                                                                                                                                                                                                                                                                                                                                                                                                         | Classification | Classification procedure          | -    | -                                             |                  |                  |                  |                           |         |                                                  |
| Classification                                                                                                     | Classification procedure                                                                                                                                                                                                                                                                                                                                                                                                |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| -                                                                                                                  | -                                                                                                                                                                                                                                                                                                                                                                                                                       |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| 16.5.                                                                                                              | Relevant H statements (number and full text)                                                                                                                                                                                                                                                                                                                                                                            |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
|                                                                                                                    | H: -                                                                                                                                                                                                                                                                                                                                                                                                                    |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |
| 16.6.                                                                                                              | Training advice: -                                                                                                                                                                                                                                                                                                                                                                                                      |                |                                   |      |                                               |                  |                  |                  |                           |         |                                                  |

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|       |                      |                                                                                                                                                                                                                                                                                    |
|-------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16.7. | Further information: | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |
|-------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |
|-----------------------------------------------------------------------------------|
| <b>ANNEX:</b><br><b>Exposure scenario resulting to Chemical safety assessment</b> |
| -                                                                                 |

|               |                                  |                |              |            |
|---------------|----------------------------------|----------------|--------------|------------|
| Trading name: | <b>RESORCINE FUCHSIN REAGENT</b> |                |              |            |
| Product code: | RFR-OT-X**                       | Revision date: | 04 July 2019 | Version: 3 |

| SECTION 1: Identification of the substance/mixture and of the company/undertaking |                                                                               |                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1                                                                               | Product identifier                                                            |                                                                                                                                                                                                                |
|                                                                                   | Trading name:                                                                 | RESORCINE FUCHSIN REAGENT                                                                                                                                                                                      |
|                                                                                   | Chemical name:                                                                | -                                                                                                                                                                                                              |
|                                                                                   | Catalogue number:                                                             | RFR-OT-X**                                                                                                                                                                                                     |
| 1.2                                                                               | Relevant identified uses of the substance or mixture and uses advised against |                                                                                                                                                                                                                |
|                                                                                   | Uses:                                                                         | For use with Elastica-Van Gieson and Weigert-Van Gieson staining kits.                                                                                                                                         |
|                                                                                   | Uses advised against:                                                         | Only the identified uses are advised.                                                                                                                                                                          |
|                                                                                   | Reason why uses advised against:                                              | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes. |
| 1.3                                                                               | Details of the supplier of the safety data sheet                              |                                                                                                                                                                                                                |
|                                                                                   | Supplier:                                                                     | BioGnost Ltd.                                                                                                                                                                                                  |
|                                                                                   | Address:                                                                      | Medjugorska 59, Zagreb                                                                                                                                                                                         |
|                                                                                   | Telephone number:                                                             | +385 1 2409997                                                                                                                                                                                                 |
|                                                                                   | Telefax.:                                                                     | +385 1 2404039                                                                                                                                                                                                 |
|                                                                                   | e-mail of competent person:                                                   | <a href="mailto:msds@biognost.hr">msds@biognost.hr</a>                                                                                                                                                         |
|                                                                                   | National contact:                                                             | -                                                                                                                                                                                                              |
| 1.4                                                                               | Emergency telephone number                                                    |                                                                                                                                                                                                                |
|                                                                                   | National Protection and Rescue Directorate:                                   | 112                                                                                                                                                                                                            |
|                                                                                   | Medical information:                                                          | +385 1 2348 342                                                                                                                                                                                                |
|                                                                                   | Other information:                                                            | -                                                                                                                                                                                                              |

| SECTION 2. Hazards identification                                  |                                                                |                           |
|--------------------------------------------------------------------|----------------------------------------------------------------|---------------------------|
| 2.1                                                                | Classification of the substance or mixture                     |                           |
| 2.1.1                                                              | Classification according to Regulation (EC) No 1272/2008 (CLP) |                           |
|                                                                    | Hazard class and category code:                                | Hazard statements*:       |
|                                                                    | Flam. Liq. 2                                                   | H225                      |
|                                                                    | Carc. 1B                                                       | H350                      |
|                                                                    | Skin Irr. 2                                                    | H315                      |
|                                                                    | Eye Irr. 2                                                     | H319                      |
| 2.1.2.                                                             | Additional information                                         |                           |
|                                                                    | -                                                              |                           |
| *For full text of Hazard- and EU Hazard-statements: see SECTION 16 |                                                                |                           |
| 2.2                                                                | Label elements                                                 |                           |
|                                                                    | Product identification:                                        | RESORCINE FUCHSIN REAGENT |

|               |                                  |                |              |            |
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|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Identification number:                | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Authorization number:                 | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hazard pictograms:                    | <div style="text-align: center;"> <br/> GHS02<br/> <br/> GHS07<br/> <br/> GHS08 </div>                                                                                                                                        |
| Signal word:                          | Danger                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Hazard statements:                    | H225 Highly flammable liquid and vapour.<br>H350 May cause cancer.<br>H315 Causes skin irritation.<br>H319 Causes serious eye irritation.                                                                                                                                                                                                                                                                                                                                         |
| Precautionary statements:             | P210 Keep away from heat/sparks/open flames/hot surfaces. - Do not smoke.<br>P233 Keep container tightly closed.<br>P280 Wear protective gloves/protective clothing/eye/face protection.<br>P302+P352 IF ON SKIN: Wash with plenty of water and soap.<br>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P308 + P313 IF exposed or concerned: Get medical advice or attention. |
| Supplemental hazard information (EU): | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2.3 Other hazards                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                       | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**SECTION 3. Composition/information on ingredients**

|               |                                  |                |              |            |
|---------------|----------------------------------|----------------|--------------|------------|
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| CAS/<br>EC/<br>Index number              | REACH<br>Registration No  | Weight % content<br>(or range) | Identification name                                                            | Classification<br>according to<br>Regulation (EC) No<br>1272/2008 (CLP) |
|------------------------------------------|---------------------------|--------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 64-17-5/<br>200-578-6/<br>603-002-00-5   | 01-2119457610-<br>43-xxxx | ≥ 50 % - <100%                 | ethanol                                                                        | Flam. Liq. 2; H225                                                      |
| 569-61-9/<br>209-321-2/<br>611-031-00-X  | -                         | < 1 %                          | 4,4'-(4-iminocyclohexa-2,5-<br>dienylidenemethylene)dianiline<br>hydrochloride | Carc 1B; H350                                                           |
| 7647-01-0/<br>231-595-7/<br>017-002-00-2 | -                         | < 5%                           | hydrochloric acid, 37%                                                         | Skin Corr. 1B; H314<br>STOT SE 3; H335                                  |

| <b>SECTION 4. First aid measures</b> |                                                             |                                                                                                                                                                                                                                                                                     |
|--------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1                                  | Description of first aid measures                           |                                                                                                                                                                                                                                                                                     |
|                                      | General notes:                                              | If the suggested first aid measures do not prove sufficient, seek medical attention.                                                                                                                                                                                                |
|                                      | Following inhalation:                                       | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen.                                                                                                 |
|                                      | Following skin contact:                                     | Remove contaminated clothing. Immediately wash with plenty of water for at least 20 minutes. Seek medical assistance if the symptoms of irritation remain.                                                                                                                          |
|                                      | Following eye contact:                                      | Rinse out with plenty of water with the eyelid held wide open for at least 20 minutes. If the symptoms remain, immediately call in ophthalmologist.                                                                                                                                 |
|                                      | Following ingestion:                                        | Rinse the mouth thoroughly with 1-2 glasses of water. Immediately consult a physician and show the container or label. In case of swallowing large quantities, transport the afflicted person to the hospital.                                                                      |
|                                      | Self-protection of the first aider:                         | -                                                                                                                                                                                                                                                                                   |
| 4.2                                  | Most important symptoms and effects, both acute and delayed |                                                                                                                                                                                                                                                                                     |
|                                      | Following inhalation:                                       | May cause eye irritation and upper respiratory system (stinging sensation, irritation). Bronchoconstriction is possible. Possible symptoms include CNS symptoms such as headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. |
|                                      | Following skin contact:                                     | Defatting, dry skin.                                                                                                                                                                                                                                                                |
|                                      | Following eye contact:                                      | Splatter may cause discomfort, stinging sensation, conjunctival redness, corneal surface lesions.                                                                                                                                                                                   |

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|     |                                                                            |                                                                                                                                                                                                                                            |
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|     | Following ingestion:                                                       | It may lead to occurrence of strong sensation of stinging, headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. If denaturants are present, dyspepsia may occur (such as vomiting). |
| 4.3 | Indication of any immediate medical attention and special treatment needed |                                                                                                                                                                                                                                            |
|     | -                                                                          |                                                                                                                                                                                                                                            |

|                                         |                                                                                                                                                                 |                                                                                                             |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>SECTION 5. Firefighting measures</b> |                                                                                                                                                                 |                                                                                                             |
| 5.1                                     | Extinguishing media                                                                                                                                             |                                                                                                             |
|                                         | Suitable extinguishing media:                                                                                                                                   | Small fire - water spray, dry powder, CO <sub>2</sub><br>Large fire - water spray or alcohol resistant foam |
|                                         | Unsuitable extinguishing media:                                                                                                                                 | Water with full jet                                                                                         |
| 5.2                                     | Special hazards arising from the substance or mixture                                                                                                           |                                                                                                             |
|                                         | Hazardous combustion products:                                                                                                                                  | Formation of toxic gases is possible during heating or in case of fire.                                     |
| 5.3                                     | Advice for firefighters                                                                                                                                         |                                                                                                             |
|                                         | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing.                                                                    |                                                                                                             |
| 5.4                                     | Additional information                                                                                                                                          |                                                                                                             |
|                                         | Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. Do not contaminate the environment with extinguishing media. |                                                                                                             |

|                                               |                                                                                                                                                         |                                                                                                                                                                                                             |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SECTION 6. Accidental release measures</b> |                                                                                                                                                         |                                                                                                                                                                                                             |
| 6.1                                           | Personal precautions, protective equipment and emergency procedures                                                                                     |                                                                                                                                                                                                             |
| 6.1.1.                                        | For non-emergency personnel                                                                                                                             |                                                                                                                                                                                                             |
|                                               | Protective equipment:                                                                                                                                   | Use personal protective equipment (see Section 8).                                                                                                                                                          |
|                                               | Accident prevention methods:                                                                                                                            | Evacuate members of all non-essential personnel and those members without protective equipment. Avoid breathing vapors and avoid contact with skin and eyes. Do not smoke. Keep away from ignition sources. |
|                                               | Emergency procedures:                                                                                                                                   | Mark the area using proper signs.                                                                                                                                                                           |
| 6.1.2.                                        | For emergency responders:                                                                                                                               |                                                                                                                                                                                                             |
|                                               | Use protective equipment; in case of inadequate ventilation use adequate airways protective equipment (see Section 8).                                  |                                                                                                                                                                                                             |
| 6.2                                           | Environmental precautions:                                                                                                                              |                                                                                                                                                                                                             |
|                                               | Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112. |                                                                                                                                                                                                             |
| 6.3                                           | Methods and material for containment and cleaning up                                                                                                    |                                                                                                                                                                                                             |
| 6.3.1.                                        | Bunding, covering of drains; capping procedures:                                                                                                        | Sand protective barrier or barriers made of similar materials.                                                                                                                                              |

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| 6.3.2. | Cleaning up:                                                                                                                                                   | Where possible, the substance can be absorbed by using absorbing material. Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water. |
| 6.3.3. | Other information:                                                                                                                                             | Secure proper ventilation. Do not use incompatible materials (see Section 10).                                                                                                                                                                                                                                                                                                                                  |
| 6.4    | Reference to other sections                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|        | See Section 7 for information on safe handling.<br>See Section 8 for information on personal protection equipment.<br>See Section 13 for disposal information. |                                                                                                                                                                                                                                                                                                                                                                                                                 |

| SECTION 7. Handling and storage |                                                                                                  |                                                                                                                                                                              |
|---------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1                             | Precautions for safe handling                                                                    |                                                                                                                                                                              |
| 7.1.1.                          | Protection measures                                                                              |                                                                                                                                                                              |
|                                 | Measures to prevent fire:                                                                        | Use in well ventilated storage rooms. Keep away from sources of ignition and heat. Do not use tools that cause sparks. Do not smoke.                                         |
|                                 | Measures to prevent aerosol and dust generation:                                                 | Secure proper ventilation.                                                                                                                                                   |
|                                 | Measures to protect the environment:                                                             | Prevent spilling into the sewage system and waterways.                                                                                                                       |
|                                 | Other measures:                                                                                  | Protect against electrostatic charges.                                                                                                                                       |
| 7.1.2.                          | Advice on general occupational hygiene:                                                          |                                                                                                                                                                              |
|                                 | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. |                                                                                                                                                                              |
| 7.2                             | Conditions for safe storage, including any incompatibilities                                     |                                                                                                                                                                              |
|                                 | Technical measures and storage conditions:                                                       | Keep in tightly closed and upright set containers in a well ventilated storage rooms at temperatures ranging from 15 to 25 °C. Protect from heat and direct sunlight.        |
|                                 | Packaging materials:                                                                             | Manufacturer's original packaging.                                                                                                                                           |
|                                 | Requirements for storage rooms and vessels:                                                      | Keep away from food and drink. Keep the containers tightly closed.                                                                                                           |
|                                 | Advices for storage equipment:                                                                   | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.  |
|                                 | Further information on storage conditions:                                                       | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10). |

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|-----|---------------------------------------|---|--|
| 7.3 | Specific end use(s)                   |   |  |
|     | Recommendations:                      | - |  |
|     | Industrial sector specific solutions: | - |  |

## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

| Substance         | CAS No    | Occupational exposure limit values/short term values |                   | Biological limit values |
|-------------------|-----------|------------------------------------------------------|-------------------|-------------------------|
|                   |           | ppm                                                  | mg/m <sup>3</sup> |                         |
| Ethanol           | 64-17-5   | 1000/-                                               | 1900/-            | -                       |
| Hydrogen chloride | 7647-01-0 | 5/10                                                 | 8/15              | -                       |

|                 |   |         |   |
|-----------------|---|---------|---|
| Substance name: | - |         |   |
| EC No:          | - | CAS No: | - |

### DNEL

#### Industrial

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic         |
|--------------------|--------------------|-----------------------|----------------------|---------------------------------|
| Oral               | -                  | -                     | -                    | -                               |
| Inhalation         | -                  | -                     | -                    | 950 mg/m <sup>3</sup> (ethanol) |
| Dermal             | -                  | -                     | -                    | 343 mg/kg (ethanol)             |

|                                                                      |   |
|----------------------------------------------------------------------|---|
| Critical physical parameters: solubility, flammability, corrosivity: | - |
|----------------------------------------------------------------------|---|

#### Consumer

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic         |
|--------------------|--------------------|-----------------------|----------------------|---------------------------------|
| Oral               | -                  | -                     | -                    | -                               |
| Inhalation         | -                  | -                     | -                    | 114 mg/m <sup>3</sup> (ethanol) |
| Dermal             | -                  | -                     | -                    | 206 mg/kg (ethanol)             |

### PNEC

| Environmental protection target    | PNEC                     |
|------------------------------------|--------------------------|
| Fresh water                        | 0.96 mg/l (ethanol)      |
| Freshwater sediments               | 3.6 mg/kg (ethanol)      |
| Marine water                       | 0.79 mg/l (ethanol)      |
| Marine sediments                   | no information available |
| Food chain                         | no information available |
| Microorganisms in sewage treatment | no information available |
| Soil (agricultural)                | 0.63 mg/kg (ethanol)     |

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|          |                                                                                |                                                                                                                                                                                                                                                                                                                                 |
|----------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Air      |                                                                                | no information available                                                                                                                                                                                                                                                                                                        |
|          |                                                                                |                                                                                                                                                                                                                                                                                                                                 |
| 8.2      | Exposure controls                                                              |                                                                                                                                                                                                                                                                                                                                 |
| 8.2.1.   | Appropriate engineering controls                                               |                                                                                                                                                                                                                                                                                                                                 |
|          | Substance/mixture related measures to prevent exposure during identified uses: | Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.                                                                                                                                                                                                       |
|          | Structural measures to prevent exposure:                                       | In accordance with Section 7.                                                                                                                                                                                                                                                                                                   |
|          | Organisational measures to prevent exposure:                                   | Organization of work in order to reduce other worker's influence during work process.                                                                                                                                                                                                                                           |
|          | Technical measures to prevent exposure:                                        | Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels. Secure stations for rinsing eyes and showering.                                                                                                                                                                        |
| 8.2.2.   | Personal protection equipment                                                  |                                                                                                                                                                                                                                                                                                                                 |
| 8.2.2.1. | Eye and face protection:                                                       | Safety glasses that stick to face (EN 166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air.                                                                                                                          |
| 8.2.2.2. | Skin protection                                                                |                                                                                                                                                                                                                                                                                                                                 |
|          | Hand protection:                                                               | The protective gloves have to satisfy the specification of Regulation (EU) 2016/425 and the related standard EN 374.<br>Glove material: nitrile rubber<br>Glove thickness: 0.40 mm<br>Time until perforation: > 480 min                                                                                                         |
|          | Other skin protection:                                                         | During everyday work use cotton clothing (EN 340) and suitable footwear, such as rubber boots (EN 20345) or shoes that cover the entire foot. In case of spilling hazard, use clothing made of impermeable material suitable for protection from liquid chemicals (Viton, PVC, himex) and footwear made from the same material. |
| 8.2.2.3. | Respiratory protection:                                                        | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI.                                                                                                                            |
| 8.2.2.4. | Thermal hazards:                                                               | No information available                                                                                                                                                                                                                                                                                                        |
| 8.2.3.   | Environmental exposure controls                                                |                                                                                                                                                                                                                                                                                                                                 |
|          | Substance/mixture related measures to prevent exposure:                        | See Section 6                                                                                                                                                                                                                                                                                                                   |
|          | Structural measures to prevent exposure:                                       | Use modern equipment.                                                                                                                                                                                                                                                                                                           |
|          | Organisational measures to prevent exposure:                                   | Adapt the work process to the required working conditions of the workplace.                                                                                                                                                                                                                                                     |

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|-----------------------------------------|---------------|
| Technical measures to prevent exposure: | See Section 6 |
|-----------------------------------------|---------------|

| <b>SECTION 9. Physical and chemical properties</b> |                                                       |                             |                          |
|----------------------------------------------------|-------------------------------------------------------|-----------------------------|--------------------------|
| 9.1                                                | Information on basic physical and chemical properties |                             |                          |
|                                                    |                                                       | Value                       | Method                   |
|                                                    | Physical state:                                       | liquid                      | No information available |
|                                                    | Colour:                                               | dark violet                 | No information available |
|                                                    | Odour:                                                | alcohol like                | No information available |
|                                                    | Odor threshold:                                       | No information available    | No information available |
|                                                    | pH:                                                   | No information available    | No information available |
|                                                    | Melting point / freezing point:                       | No information available    | No information available |
|                                                    | Initial boiling point and boiling range:              | No information available    | No information available |
|                                                    | Flash point:                                          | 17 °C                       | No information available |
|                                                    | Evaporation rate:                                     | No information available    | No information available |
|                                                    | Flammability (solid, gas):                            | No information available    | No information available |
|                                                    | Upper/lower flammability or explosive limits:         | No information available    | No information available |
|                                                    | Vapour pressure:                                      | No information available    | No information available |
|                                                    | Vapour density:                                       | No information available    | No information available |
|                                                    | Relative density:                                     | No information available    | No information available |
|                                                    | Bulk density:                                         | No information available    | No information available |
|                                                    | Solubility(ies):                                      | 1 g/l (20°C)                | No information available |
|                                                    | Partition coefficient: n-octanol/water (log Kow):     | No information available    | No information available |
|                                                    | Auto-ignition temperature:                            | Product is not selfigniting | No information available |
|                                                    | Decomposition temperature:                            | No information available    | No information available |
|                                                    | Viscosity:                                            | No information available    | No information available |
|                                                    | Explosive properties:                                 | No information available    | No information available |
|                                                    | Oxidising properties:                                 | No information available    | No information available |
| 9.2                                                | Other information                                     |                             |                          |
|                                                    | -                                                     |                             |                          |

| <b>SECTION 10. Stability and reactivity</b> |             |                                    |
|---------------------------------------------|-------------|------------------------------------|
| 10.1                                        | Reactivity: | See subsections 10.3 through 10.5. |

|               |                                  |                |              |          |   |
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|      |                                     |                                                                                                             |
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| 10.2 | Chemical stability:                 | The product is chemically stable under standard ambient conditions of storing and using (room temperature). |
| 10.3 | Possibility of hazardous reactions: | No dangerous reactions known.                                                                               |
| 10.4 | Conditions to avoid:                | Avoid heat, sparks, open flames and other ignition sources.                                                 |
| 10.5 | Incompatible materials:             | No further relevant information available.                                                                  |
| 10.6 | Hazardous decomposition products:   | No dangerous decomposition products known.                                                                  |

| SECTION 11. Toxicological information |                                                                              |                           |                                                               |               |             |
|---------------------------------------|------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------|---------------|-------------|
| 11.1                                  | Information on toxicological effects                                         |                           |                                                               |               |             |
|                                       | Acute toxicity:                                                              |                           |                                                               |               |             |
| Route of exposure:                    | Method                                                                       | Species                   | Dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mix</sub> | Exposure time | Results     |
| Oral:                                 | -                                                                            | rat (ethanol)             | LD <sub>50</sub>                                              | -             | 7.060 mg/kg |
| Dermal:                               | -                                                                            | -                         | -                                                             | -             | -           |
| Inhalation:                           | -                                                                            | rat (ethanol)             | LC <sub>50</sub>                                              | 4 h           | 20.000 mg/l |
|                                       |                                                                              |                           |                                                               |               |             |
|                                       | Specific target organ toxicity – single exposure (STOT SE):                  |                           |                                                               |               |             |
|                                       | Specific effects                                                             |                           | Target organ                                                  |               | Note        |
| Oral:                                 | No information available                                                     |                           | No information available                                      |               | -           |
| Dermal:                               | No information available                                                     |                           | No information available                                      |               | -           |
| Inhalation:                           | No information available                                                     |                           | No information available                                      |               | -           |
|                                       |                                                                              |                           |                                                               |               |             |
|                                       | Aspiration hazard:                                                           |                           | No information available.                                     |               |             |
|                                       |                                                                              |                           |                                                               |               |             |
|                                       | Irritation and corrosion                                                     |                           |                                                               |               |             |
|                                       | Exposure time                                                                | Species                   | Evaluation                                                    | Method        | Note        |
| Skin corrosion/irritation:            | -                                                                            | -                         | -                                                             | -             | -           |
| Serious eye damage/irritation         | -                                                                            | -                         | -                                                             | -             | -           |
|                                       |                                                                              |                           |                                                               |               |             |
|                                       | Sensitization                                                                |                           |                                                               |               |             |
| Skin sensitization:                   |                                                                              | No information available. |                                                               |               |             |
| Respiratory sensitization:            |                                                                              | No information available. |                                                               |               |             |
|                                       |                                                                              |                           |                                                               |               |             |
|                                       | Symptoms related to the physical, chemical and toxicological characteristics |                           |                                                               |               |             |
| Oral exposure:                        |                                                                              | No information available. |                                                               |               |             |

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|                      |                           |
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| Dermal exposure:     | No information available. |
| Inhalation exposure: | No information available. |
| Eye exposure:        | No information available. |

|                                                        |  |  |  |  |  |  |
|--------------------------------------------------------|--|--|--|--|--|--|
| Repeated dose toxicity (subacute, subchronic, chronic) |  |  |  |  |  |  |
|--------------------------------------------------------|--|--|--|--|--|--|

|                       | Dose                     | Exposure time            | Species                  | Method                   | Evaluation               | Note |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Subacute oral         | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute dermal       | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute inhalation   | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic oral       | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic dermal     | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic oral          | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic dermal        | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic inhalation    | No information available | No information available | No information available | No information available | No information available | -    |

|                                                               |  |  |  |
|---------------------------------------------------------------|--|--|--|
| Specific target organ toxicity – repeated exposure (STOT RE): |  |  |  |
|---------------------------------------------------------------|--|--|--|

|                     | Specific effects         | Target organ             | Note |
|---------------------|--------------------------|--------------------------|------|
| Subacute oral       | No information available | No information available | -    |
| Subacute dermal     | No information available | No information available | -    |
| Subacute inhalation | No information available | No information available | -    |
| Subchronic oral     | No information available | No information available | -    |

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|                       |                          |                          |   |
|-----------------------|--------------------------|--------------------------|---|
| Subchronic dermal     | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral          | No information available | No information available | - |
| Chronic dermal        | No information available | No information available | - |
| Chronic inhalation    | No information available | No information available | - |

|                                                                    |                                                                                                                                                                    |  |  |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| CMR effects (carcinogenicity; mutagenicity; reproductive toxicity) |                                                                                                                                                                    |  |  |
| Carcinogenicity:                                                   | Based on the test of the IARC carried out on rats, appearance of tumor in the nose and in the pharynx had been experienced. Test on other species have no results. |  |  |
| Mutagenicity <i>in vitro</i> :                                     | Based on available data, the classification criteria are not met.                                                                                                  |  |  |
| Genotoxicity:                                                      | Based on available data, the classification criteria are not met.                                                                                                  |  |  |
| Mutagenicity <i>in vivo</i> :                                      | Based on available data, the classification criteria are not met.                                                                                                  |  |  |
| Germ cell mutagenicity:                                            | Based on available data, the classification criteria are not met.                                                                                                  |  |  |
| Reproductive toxicity:                                             | Based on available data, the classification criteria are not met.                                                                                                  |  |  |
| Summary of evaluation of the CMR properties:                       | Based on available data, the classification criteria are not met.                                                                                                  |  |  |

|      |                              |                          |
|------|------------------------------|--------------------------|
| 11.2 | Practical experiences:       |                          |
|      | Classification observations: | No information available |
|      | Other observations:          | No information available |
|      |                              |                          |
| 11.3 | General notes:               |                          |
|      | -                            |                          |

| SECTION 12. Ecological information |                  |               |                          |                          |                          |      |
|------------------------------------|------------------|---------------|--------------------------|--------------------------|--------------------------|------|
| 12.1                               | Toxicity         |               |                          |                          |                          |      |
| Acute (short-term) toxicity        | Dose             | Exposure time | Species                  | Method                   | Evaluation               | Note |
| Fish                               | LC <sub>50</sub> | 96 hours      | No information available | No information available | No information available | -    |
| Crustacea:                         | EC <sub>50</sub> | 48 hours      | No information available | No information available | No information available | -    |
| Algae/aquatic plants               | IC <sub>50</sub> | 4 days        | No information available | No information available | No information available | -    |

|               |                                  |                |              |          |   |  |
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|                              |                  |               |                          |                          |                          |      |
|------------------------------|------------------|---------------|--------------------------|--------------------------|--------------------------|------|
| Other organisms              | -                | -             | -                        | -                        | -                        | -    |
| Chronic (long-term) toxicity | Dose             | Exposure time | Species                  | Method                   | Evaluation               | Note |
| Fish                         | LC <sub>50</sub> | 96 hours      | No information available | No information available | No information available | -    |
| Crustacea:                   | EC <sub>50</sub> | 48 hours      | No information available | No information available | No information available | -    |
| Algae/aquatic plants         | IC <sub>50</sub> | 72 hours      | No information available | No information available | No information available | -    |
| Other organisms              | -                | -             | -                        | -                        | -                        | -    |

## 12.2 Persistence and degradability

### Abiotic degradation

|              |                          |                          |                          |      |
|--------------|--------------------------|--------------------------|--------------------------|------|
|              | Degradation half-lives   | Method                   | Evaluation               | Note |
| Marine water | No information available | No information available | No information available | -    |
| Fresh water  | No information available | No information available | No information available | -    |
| Air          | No information available | No information available | No information available | -    |
| Soil         | No information available | No information available | No information available | -    |

### Biodegradation

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| % Degradation            | Time (days)              | Method                   | Evaluation               | Note                     |
| No information available | No information available | No information available | No information available | No information available |
|                          |                          |                          |                          |                          |
|                          |                          |                          |                          |                          |

## 12.3 Bioaccumulative potential

### Octanol-water partition coefficient (log K<sub>ow</sub>)

|       |               |    |    |        |            |      |
|-------|---------------|----|----|--------|------------|------|
| Value | Concentration | pH | °C | Method | Evaluation | Note |
| -     | -             | -  | -  | -      | -          | -    |
|       |               |    |    |        |            |      |
|       |               |    |    |        |            |      |

|               |                                  |                |              |          |   |
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|                               |                          |                          |                          |      |
|-------------------------------|--------------------------|--------------------------|--------------------------|------|
| Bioconcentration factor (BCF) |                          |                          |                          |      |
| Value                         | Species                  | Method                   | Evaluation               | Note |
| No information available      | No information available | No information available | No information available | -    |
|                               |                          |                          |                          |      |
|                               |                          |                          |                          |      |

|                                                  |                  |                          |                          |                          |                          |      |
|--------------------------------------------------|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Chronic ecotoxicity                              |                  |                          |                          |                          |                          |      |
| Value                                            | Dose             | Exposure time            | Species                  | Method                   | Evaluation               | Note |
| Chronic toxicity on fish                         | LC <sub>50</sub> | No information available | No information available | No information available | No information available | -    |
| Chronic toxicity on crustacea ( <i>Daphnia</i> ) | EC <sub>50</sub> | No information available | No information available | No information available | No information available | -    |

#### 12.4 Mobility in soil

|                                                                |                          |                          |                          |      |  |
|----------------------------------------------------------------|--------------------------|--------------------------|--------------------------|------|--|
| Known or predicted distribution in environmental compartments: |                          |                          |                          |      |  |
| No information available                                       |                          |                          |                          |      |  |
| Surface tension:                                               |                          |                          |                          |      |  |
| Value                                                          | °C                       | Concentration            | Method                   | Note |  |
| No information available                                       | No information available | No information available | No information available | -    |  |
|                                                                |                          |                          |                          |      |  |
|                                                                |                          |                          |                          |      |  |

|                         |                                     |                          |                          |                          |      |
|-------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|------|
| Adsorption / desorption |                                     |                          |                          |                          |      |
| Transport               | A/D coefficient<br>Henry's constant | log Kow                  | Evaporation rate         | Method                   | Note |
| Soil-water              | No information available            | No information available | No information available | No information available | -    |
| Water-air               | No information available            | No information available | No information available | No information available | -    |
| Soil-air                | No information available            | No information available | No information available | No information available | -    |

|               |                                  |                |              |          |   |
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|      |                                    |
|------|------------------------------------|
| 12.5 | Results of PBT and vPvB assessment |
|      | Not applicable.                    |

|      |                                            |
|------|--------------------------------------------|
| 12.6 | Other adverse effects                      |
|      | No further relevant information available. |

### SECTION 13. Disposal considerations

|      |                         |
|------|-------------------------|
| 13.1 | Waste treatment methods |
|------|-------------------------|

|         |                                                                                                            |
|---------|------------------------------------------------------------------------------------------------------------|
| 13.1.1. | Product/Packaging disposal:                                                                                |
|         | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection. |

|         |                                                                                                    |
|---------|----------------------------------------------------------------------------------------------------|
| 13.1.2. | Waste codes/waste designations according to Law:                                                   |
|         | Packaging that contains residual hazardous substances or is contaminated with hazardous substances |

|         |                                         |
|---------|-----------------------------------------|
| 13.1.3. | Waste treatment – relevant information: |
|         | No information available                |

|         |                                                       |
|---------|-------------------------------------------------------|
| 13.1.4. | Sewage disposal – relevant information:               |
|         | Waste must not be disposed of into the sewage system. |

|         |                                                                                                                                                                                                                                                                                 |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13.1.5. | Other disposal recommendations:                                                                                                                                                                                                                                                 |
|         | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. |

|         |                                                          |
|---------|----------------------------------------------------------|
| 13.1.6. | Relevant Community provisions:                           |
|         | Disposal must be made according to official regulations. |

### SECTION 14 TRANSPORT INFORMATION

|                               |                                     |
|-------------------------------|-------------------------------------|
|                               | Transporting/shipment by road (ADR) |
| UN number:                    | 1170                                |
| UN proper shipping name:      | Ethanol solution                    |
| Transport hazard class(es):   | 3                                   |
| Packing group:                | II                                  |
| Environmentally hazardous:    | -                                   |
| Special precautions for user: | -                                   |

|               |                                  |                |              |          |   |
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|                                                                           |                  |
|---------------------------------------------------------------------------|------------------|
| Transporting/shipment by rail (RID)                                       |                  |
| UN number:                                                                | 1170             |
| UN proper shipping name:                                                  | Ethanol solution |
| Transport hazard class(es):                                               | 3                |
| Packing group:                                                            | II               |
| Environmentally hazardous:                                                | -                |
| Special precautions for user:                                             | -                |
| Inland waterway transport (ADN)                                           |                  |
| UN number:                                                                | 1170             |
| UN proper shipping name:                                                  | Ethanol solution |
| Transport hazard class(es):                                               | 3                |
| Packing group:                                                            | II               |
| Environmentally hazardous:                                                | -                |
| Special precautions for user:                                             | -                |
| Transporting/shipment by sea (IMDG)                                       |                  |
| UN number:                                                                | 1170             |
| UN proper shipping name:                                                  | Ethanol solution |
| Transport hazard class(es):                                               | 3                |
| Packing group:                                                            | II               |
| Environmentally hazardous:                                                | -                |
| Special precautions for user:                                             | -                |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: | -                |
| Transporting/shipment by air (ICAO-TI/IATA-DGR)                           |                  |
| UN number:                                                                | 1170             |
| UN proper shipping name:                                                  | Ethanol solution |
| Transport hazard class(es):                                               | 3                |
| Packing group:                                                            | II               |
| Environmentally hazardous:                                                | -                |
| Special precautions for user:                                             | -                |
| Further information:                                                      |                  |
| -                                                                         |                  |

| <b>SECTION 15. Regulatory information</b> |                                                                                                |
|-------------------------------------------|------------------------------------------------------------------------------------------------|
| 15.1                                      | Safety, health and environmental regulations/legislation specific for the substance or mixture |
|                                           | EU regulations                                                                                 |

|               |                                  |                |              |            |
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|      |                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | Authorization and/or restrictions of use                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      | Authorizations:                                                                                              | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      | Restrictions:                                                                                                | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      | Other EU regulations:                                                                                        | EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council;<br>Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH);<br>EC Regulation No. 2037/200 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer;<br>EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals;<br>EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants;<br>Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives |
|      | Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      | National legislation:                                                                                        | Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 15.2 | Chemical safety assessment                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      | None                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| SECTION 16. Other information |                                                                                                                         |                           |                                                  |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------|
| 16.1                          | Indication of changes:                                                                                                  | -                         |                                                  |
| 16.2                          | Abbreviations and acronyms:                                                                                             | PBT                       | Stable, bioaccumulative and toxic                |
|                               |                                                                                                                         | vPvB                      | Strongly stable and strongly bioaccumulative.    |
|                               |                                                                                                                         | LD <sub>50</sub>          | Lethal dose, 50%                                 |
|                               |                                                                                                                         | LC <sub>50</sub>          | Lethal concentration, 50%                        |
|                               |                                                                                                                         | TCOJ                      | Specific target organ toxicity - single exposure |
| 16.3.                         | Key literature references and source of data:                                                                           | Manufacturer's MSDS file. |                                                  |
| 16.4.                         | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) |                           |                                                  |
| Classification                |                                                                                                                         | Classification procedure  |                                                  |
| -                             |                                                                                                                         | -                         |                                                  |
| 16.5.                         | Relevant H statements (number and full text)                                                                            |                           |                                                  |

|               |                                  |                |              |          |   |
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|       |                      |                                                                                                                                                                                                                                                                                    |
|-------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | H225                 | Highly flammable liquid and vapor.                                                                                                                                                                                                                                                 |
|       | H314                 | Causes severe skin burns and eye damage                                                                                                                                                                                                                                            |
|       | H315                 | Causes skin irritation.                                                                                                                                                                                                                                                            |
| H:    | H319                 | Causes serious eye irritation.                                                                                                                                                                                                                                                     |
|       | H335                 | May cause respiratory irritation.                                                                                                                                                                                                                                                  |
|       | H350                 | May cause cancer.                                                                                                                                                                                                                                                                  |
| 16.6. | Training advice:     | -                                                                                                                                                                                                                                                                                  |
| 16.7. | Further information: | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |

|                                                                         |  |
|-------------------------------------------------------------------------|--|
| <b>ANNEX: Exposure scenario resulting to chemical safety assessment</b> |  |
| -                                                                       |  |

|               |                                        |                      |              |            |
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| SECTION 1: Identification of the substance/mixture and of the company/undertaking |                                                                               |                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1                                                                               | Product identifier                                                            |                                                                                                                                                                                                                |
|                                                                                   | Trading name:                                                                 | HCL REAGENT, WEIGERT-VAN GIESON                                                                                                                                                                                |
|                                                                                   | Chemical name:                                                                | -                                                                                                                                                                                                              |
|                                                                                   | Catalogue number:                                                             | HCLW-OT-X**                                                                                                                                                                                                    |
| 1.2                                                                               | Relevant identified uses of the substance or mixture and uses advised against |                                                                                                                                                                                                                |
|                                                                                   | Uses:                                                                         | For use with special staining kits in histopathology.                                                                                                                                                          |
|                                                                                   | Uses advised against:                                                         | Only the identified uses are advised.                                                                                                                                                                          |
|                                                                                   | Reason why uses advised against:                                              | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes. |
| 1.3                                                                               | Details of the supplier of the safety data sheet                              |                                                                                                                                                                                                                |
|                                                                                   | Supplier:                                                                     | BioGnost Ltd.                                                                                                                                                                                                  |
|                                                                                   | Address:                                                                      | Medjugorska 59, Zagreb                                                                                                                                                                                         |
|                                                                                   | Telephone number:                                                             | +385 1 2409997                                                                                                                                                                                                 |
|                                                                                   | Telefax.:                                                                     | +385 1 2404039                                                                                                                                                                                                 |
|                                                                                   | e-mail of competent person:                                                   | <a href="mailto:msds@biognost.hr">msds@biognost.hr</a>                                                                                                                                                         |
|                                                                                   | National contact:                                                             | -                                                                                                                                                                                                              |
| 1.4                                                                               | Emergency telephone number                                                    |                                                                                                                                                                                                                |
|                                                                                   | National Protection and Rescue Directorate:                                   | 112                                                                                                                                                                                                            |
|                                                                                   | Medical information:                                                          | +385 1 2348 342                                                                                                                                                                                                |
|                                                                                   | Other information:                                                            | -                                                                                                                                                                                                              |

| SECTION 2. Hazards identification                                  |                                                                |                                 |
|--------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------|
| 2.1                                                                | Classification of the substance or mixture                     |                                 |
| 2.1.1                                                              | Classification according to Regulation (EC) No 1272/2008 (CLP) |                                 |
|                                                                    | Hazard class and category code:                                | Hazard statements*:             |
|                                                                    | Flam. Liq. 2                                                   | H225                            |
| 2.1.2.                                                             | Additional information                                         |                                 |
|                                                                    | -                                                              |                                 |
| *For full text of Hazard- and EU Hazard-statements: see SECTION 16 |                                                                |                                 |
| 2.2                                                                | Label elements                                                 |                                 |
|                                                                    | Product identification:                                        | HCL REAGENT, WEIGERT-VAN GIESON |
|                                                                    | Identification number:                                         | -                               |
|                                                                    | Authorization number:                                          | -                               |

|               |                                        |                      |              |            |
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|                                       |                                                                                                                                                                                                     |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard pictograms:                    |                                                                                                                    |
| Signal word:                          | Danger                                                                                                                                                                                              |
| Hazard statements:                    | H225 Highly flammable liquid and vapor.                                                                                                                                                             |
| Precautionary statements:             | P210 Keep away from heat/sparks/open flames/hot surfaces. - Do not smoke.<br>P233 Keep container tightly closed.<br>P280 Wear protective gloves/protective clothing/eye/protection/face protection. |
| Supplemental hazard information (EU): | -                                                                                                                                                                                                   |
| 2.3                                   | Other hazards                                                                                                                                                                                       |
|                                       | -                                                                                                                                                                                                   |

| SECTION 3. Composition/information on ingredients |                           |                                |                        |                                                                      |
|---------------------------------------------------|---------------------------|--------------------------------|------------------------|----------------------------------------------------------------------|
| CAS/<br>EC/<br>Index number                       | REACH Registration<br>No  | Weight % content<br>(or range) | Identification name    | Classification according to<br>Regulation (EC) No<br>1272/2008 (CLP) |
| 64-17-5/<br>200-578-6/<br>603-002-00-5            | 01-2119457610-43-<br>xxxx | ≥ 50%                          | ethanol                | Flam. Liq. 2; H225                                                   |
| 7647-01-0/<br>231-595-7/<br>017-002-00-2          | 01-2119484862-27-<br>xxxx | < 1%                           | hydrochloric acid, 37% | Skin Corr. 1A; H314<br>Acute Tox. 3; H331                            |

| SECTION 4. First aid measures |                                                                                                                                                                                     |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1                           | Description of first aid measures                                                                                                                                                   |
| General notes:                | If the suggested first aid measures do not prove sufficient, seek medical attention.                                                                                                |
| Following inhalation:         | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen. |
| Following skin contact:       | Remove contaminated clothing. Immediately wash with plenty of water for at least 20 minutes. Seek medical assistance if the symptoms of irritation remain.                          |
| Following eye contact:        | Rinse out with plenty of water with the eyelid held wide open for at least 20 minutes. If the symptoms remain, immediately call in ophthalmologist.                                 |

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|     |                                                                            |                                                                                                                                                                                                                |
|-----|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Following ingestion:                                                       | Rinse the mouth thoroughly with 1-2 glasses of water. Immediately consult a physician and show the container or label. In case of swallowing large quantities, transport the afflicted person to the hospital. |
|     | Self-protection of the first aider:                                        | -                                                                                                                                                                                                              |
| 4.2 | Most important symptoms and effects, both acute and delayed                |                                                                                                                                                                                                                |
|     | Following inhalation:                                                      | Depending on concentration and exposure time, it may lead to mucosa irritation, cough, and dyspnea.                                                                                                            |
|     | Following skin contact:                                                    | Depending on concentration and exposure time, it may lead to irritation, rash, skin drying and skin cracking.                                                                                                  |
|     | Following eye contact:                                                     | Depending on concentration and exposure time, it may lead to irritation, tearing, redness and pain.                                                                                                            |
|     | Following ingestion:                                                       | Depending on concentration and exposure time, it may lead to stinging and digestive mucus damage, abdominal pain, nausea, vomiting.                                                                            |
| 4.3 | Indication of any immediate medical attention and special treatment needed |                                                                                                                                                                                                                |
|     | -                                                                          |                                                                                                                                                                                                                |

|                                         |                                                                                                                                                                 |                                                                                                             |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>SECTION 5. Firefighting measures</b> |                                                                                                                                                                 |                                                                                                             |
| 5.1                                     | Extinguishing media                                                                                                                                             |                                                                                                             |
|                                         | Suitable extinguishing media:                                                                                                                                   | Small fire - water spray, dry powder, CO <sub>2</sub><br>Large fire - water spray or alcohol resistant foam |
|                                         | Unsuitable extinguishing media:                                                                                                                                 | Water with full jet                                                                                         |
| 5.2                                     | Special hazards arising from the substance or mixture                                                                                                           |                                                                                                             |
|                                         | Hazardous combustion products:                                                                                                                                  | Formation of toxic gases is possible during heating or in case of fire.                                     |
| 5.3                                     | Advice for firefighters                                                                                                                                         |                                                                                                             |
|                                         | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing.                                                                    |                                                                                                             |
| 5.4                                     | Additional information                                                                                                                                          |                                                                                                             |
|                                         | Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. Do not contaminate the environment with extinguishing media. |                                                                                                             |

|                                               |                                                                     |                                                                                                                                                                                                             |
|-----------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SECTION 6. Accidental release measures</b> |                                                                     |                                                                                                                                                                                                             |
| 6.1                                           | Personal precautions, protective equipment and emergency procedures |                                                                                                                                                                                                             |
| 6.1.1.                                        | For non-emergency personnel                                         |                                                                                                                                                                                                             |
|                                               | Protective equipment:                                               | Use personal protective equipment (see Section 8).                                                                                                                                                          |
|                                               | Accident prevention methods:                                        | Evacuate members of all non-essential personnel and those members without protective equipment. Avoid breathing vapors and avoid contact with skin and eyes. Do not smoke. Keep away from ignition sources. |

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|        |                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | Emergency procedures:                                                                                                                                          | Mark the area using proper signs.                                                                                                                                                                                                                                                                                                                                                                               |
| 6.1.2. | For emergency responders:                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|        | Use protective equipment; in case of inadequate ventilation use adequate airways protective equipment (see Section 8).                                         |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6.2    | Environmental precautions:                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|        | Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.        |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6.3    | Methods and material for containment and cleaning up                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6.3.1. | Bundling, covering of drains; capping procedures:                                                                                                              | Sand protective barrier or barriers made of similar materials.                                                                                                                                                                                                                                                                                                                                                  |
| 6.3.2. | Cleaning up:                                                                                                                                                   | Where possible, the substance can be absorbed by using absorbing material. Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water. |
| 6.3.3. | Other information:                                                                                                                                             | Secure proper ventilation. Do not use incompatible materials (see Section 10).                                                                                                                                                                                                                                                                                                                                  |
| 6.4    | Reference to other sections                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|        | See Section 7 for information on safe handling.<br>See Section 8 for information on personal protection equipment.<br>See Section 13 for disposal information. |                                                                                                                                                                                                                                                                                                                                                                                                                 |

| SECTION 7. Handling and storage |                                                                                                  |                                                                                                                                                                       |
|---------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1                             | Precautions for safe handling                                                                    |                                                                                                                                                                       |
| 7.1.1.                          | Protection measures                                                                              |                                                                                                                                                                       |
|                                 | Measures to prevent fire:                                                                        | Use in well ventilated storage rooms. Keep away from sources of ignition and heat. Do not use tools that cause sparks. Do not smoke.                                  |
|                                 | Measures to prevent aerosol and dust generation:                                                 | Secure proper ventilation.                                                                                                                                            |
|                                 | Measures to protect the environment:                                                             | Prevent spilling into the sewage system and waterways.                                                                                                                |
|                                 | Other measures:                                                                                  | Protect against electrostatic charges.                                                                                                                                |
| 7.1.2.                          | Advice on general occupational hygiene:                                                          |                                                                                                                                                                       |
|                                 | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. |                                                                                                                                                                       |
| 7.2                             | Conditions for safe storage, including any incompatibilities                                     |                                                                                                                                                                       |
|                                 | Technical measures and storage conditions:                                                       | Keep in tightly closed and upright set containers in a well ventilated storage rooms at temperatures ranging from 15 to 25 °C. Protect from heat and direct sunlight. |

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|     |                                             |                                                                                                                                                                              |
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|     | Packaging materials:                        | Manufacturer's original packaging.                                                                                                                                           |
|     | Requirements for storage rooms and vessels: | Keep away from food and drink. Keep the containers tightly closed.                                                                                                           |
|     | Advices for storage equipment:              | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.  |
|     | Further information on storage conditions:  | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10). |
| 7.3 | Specific end use(s)                         |                                                                                                                                                                              |
|     | Recommendations:                            | -                                                                                                                                                                            |
|     | Industrial sector specific solutions:       | -                                                                                                                                                                            |

| SECTION 8. Exposure controls/personal protection                     |                    |                                                      |                      |                                 |
|----------------------------------------------------------------------|--------------------|------------------------------------------------------|----------------------|---------------------------------|
| 8.1                                                                  | Control parameters |                                                      |                      |                                 |
| Substance                                                            | CAS No             | Occupational exposure limit values/short term values |                      | Biological limit values         |
|                                                                      |                    | ppm                                                  | mg/m <sup>3</sup>    |                                 |
| Ethanol                                                              | 64-17-5            | 1000/-                                               | 1900/-               | -                               |
| Hydrogen chloride                                                    | 7647-01-0          | 5/10                                                 | 8/15                 | -                               |
|                                                                      |                    |                                                      |                      |                                 |
| Substance name:                                                      | -                  |                                                      |                      |                                 |
| EC No:                                                               | -                  | CAS No:                                              | -                    |                                 |
| DNEL                                                                 |                    |                                                      |                      |                                 |
| Industrial                                                           |                    |                                                      |                      |                                 |
| Route of exposure:                                                   | Acute effect local | Acute effect systemic                                | Chronic effect local | Chronic effect systemic         |
| Oral                                                                 | -                  | -                                                    | -                    | -                               |
| Inhalation                                                           | -                  | -                                                    | -                    | 950 mg/m <sup>3</sup> (ethanol) |
| Dermal                                                               | -                  | -                                                    | -                    | 343 mg/kg (ethanol)             |
| Critical physical parameters: solubility, flammability, corrosivity: |                    |                                                      | -                    |                                 |
| Consumer                                                             |                    |                                                      |                      |                                 |
| Route of exposure:                                                   | Acute effect local | Acute effect systemic                                | Chronic effect local | Chronic effect systemic         |
| Oral                                                                 | -                  | -                                                    | -                    | -                               |
| Inhalation                                                           | -                  | -                                                    | -                    | 114 mg/m <sup>3</sup> (ethanol) |
| Dermal                                                               | -                  | -                                                    | -                    | 206 mg/kg (ethanol)             |

|               |                                        |                      |              |          |   |
|---------------|----------------------------------------|----------------------|--------------|----------|---|
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| <b>PNEC</b>                        |                          |
|------------------------------------|--------------------------|
| Environmental protection target    | <b>PNEC</b>              |
| Fresh water                        | 0.96 mg/l (ethanol)      |
| Freshwater sediments               | 3.6 mg/kg (ethanol)      |
| Marine water                       | 0.79 mg/l (ethanol)      |
| Marine sediments                   | no information available |
| Food chain                         | no information available |
| Microorganisms in sewage treatment | no information available |
| Soil (agricultural)                | 0.63 mg/kg (ethanol)     |
| Air                                | no information available |

## 8.2 Exposure controls

### 8.2.1. Appropriate engineering controls

|                                                                                |                                                                                                                                                          |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substance/mixture related measures to prevent exposure during identified uses: | Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.                                |
| Structural measures to prevent exposure:                                       | In accordance with Section 7.                                                                                                                            |
| Organisational measures to prevent exposure:                                   | Organization of work in order to reduce other worker's influence during work process.                                                                    |
| Technical measures to prevent exposure:                                        | Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels. Secure stations for rinsing eyes and showering. |

### 8.2.2. Personal protection equipment

|                                   |                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.2.2.1. Eye and face protection: | Safety glasses that stick to face (EN 166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air.                                                                                                                          |
| 8.2.2.2. Skin protection          |                                                                                                                                                                                                                                                                                                                                 |
| Hand protection:                  | <p>The protective gloves have to satisfy the specification of Regulation (EU) 2016/425 and the related standard EN 374.</p> <p>Glove material: nitrile rubber</p> <p>Glove thickness: 0.40 mm</p> <p>Time until perforation: &gt; 480 min</p>                                                                                   |
| Other skin protection:            | During everyday work use cotton clothing (EN 340) and suitable footwear, such as rubber boots (EN 20345) or shoes that cover the entire foot. In case of spilling hazard, use clothing made of impermeable material suitable for protection from liquid chemicals (Viton, PVC, himex) and footwear made from the same material. |

|               |                                        |                      |              |            |
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|          |                                                         |                                                                                                                                                                                                      |
|----------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.2.2.3. | Respiratory protection:                                 | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI. |
| 8.2.2.4. | Thermal hazards:                                        | No information available                                                                                                                                                                             |
| 8.2.3.   | Environmental exposure controls                         |                                                                                                                                                                                                      |
|          | Substance/mixture related measures to prevent exposure: | See Section 6                                                                                                                                                                                        |
|          | Structural measures to prevent exposure:                | Use modern equipment.                                                                                                                                                                                |
|          | Organisational measures to prevent exposure:            | Adapt the work process to the required working conditions of the workplace.                                                                                                                          |
|          | Technical measures to prevent exposure:                 | See Section 6                                                                                                                                                                                        |

| SECTION 9. Physical and chemical properties |                                                       |                          |                          |
|---------------------------------------------|-------------------------------------------------------|--------------------------|--------------------------|
| 9.1                                         | Information on basic physical and chemical properties |                          |                          |
|                                             |                                                       | Value                    | Method                   |
|                                             | Physical state:                                       | liquid                   | No information available |
|                                             | Colour:                                               | colourless               | No information available |
|                                             | Odour:                                                | biting                   | No information available |
|                                             | Odor threshold:                                       | No information available | No information available |
|                                             | pH:                                                   | No information available | No information available |
|                                             | Melting point / freezing point:                       | No information available | No information available |
|                                             | Initial boiling point and boiling range:              | No information available | No information available |
|                                             | Flash point:                                          | 21 °C                    | No information available |
|                                             | Evaporation rate:                                     | No information available | No information available |
|                                             | Flammability (solid, gas):                            | No information available | No information available |
|                                             | Upper/lower flammability or explosive limits:         | No information available | No information available |
|                                             | Vapour pressure:                                      | No information available | No information available |
|                                             | Vapour density:                                       | No information available | No information available |
|                                             | Relative density:                                     | No information available | No information available |
|                                             | Bulk density:                                         | No information available | No information available |
|                                             | Solubility(ies):                                      | No information available | No information available |
|                                             | Partition coefficient: n-octanol/water (log Kow):     | No information available | No information available |
|                                             | Auto-ignition temperature:                            | No information available | No information available |

|               |                                        |                      |              |          |   |
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|     |                            |                          |                          |
|-----|----------------------------|--------------------------|--------------------------|
|     | Decomposition temperature: | No information available | No information available |
|     | Viscosity:                 | No information available | No information available |
|     | Explosive properties:      | No information available | No information available |
|     | Oxidising properties:      | No information available | No information available |
| 9.2 | Other information          |                          |                          |
|     | -                          |                          |                          |

| SECTION 10. Stability and reactivity |                                     |                                                                                                             |
|--------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 10.1                                 | Reactivity:                         | See subsections 10.3 through 10.5.                                                                          |
| 10.2                                 | Chemical stability:                 | The product is chemically stable under standard ambient conditions of storing and using (room temperature). |
| 10.3                                 | Possibility of hazardous reactions: | No dangerous reactions known.                                                                               |
| 10.4                                 | Conditions to avoid:                | Avoid heat, sparks, open flames and other ignition sources.                                                 |
| 10.5                                 | Incompatible materials:             | No further relevant information available.                                                                  |
| 10.6                                 | Hazardous decomposition products:   | No dangerous decomposition products known.                                                                  |

| SECTION 11. Toxicological information |                                                             |               |                                                               |               |             |
|---------------------------------------|-------------------------------------------------------------|---------------|---------------------------------------------------------------|---------------|-------------|
| 11.1                                  | Information on toxicological effects                        |               |                                                               |               |             |
|                                       | Acute toxicity:                                             |               |                                                               |               |             |
| Route of exposure:                    | Method                                                      | Species       | Dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mix</sub> | Exposure time | Results     |
| Oral:                                 | -                                                           | rat (ethanol) | LD <sub>50</sub>                                              | -             | 7.060 mg/kg |
| Dermal:                               | -                                                           | -             | -                                                             | -             | -           |
| Inhalation:                           | -                                                           | rat (ethanol) | LC <sub>50</sub>                                              | 4 h           | 20.000 mg/l |
|                                       |                                                             |               |                                                               |               |             |
|                                       | Specific target organ toxicity – single exposure (STOT SE): |               |                                                               |               |             |
|                                       | Specific effects                                            |               | Target organ                                                  |               | Note        |
| Oral:                                 | No information available                                    |               | No information available                                      |               | -           |
| Dermal:                               | No information available                                    |               | No information available                                      |               | -           |
| Inhalation:                           | No information available                                    |               | No information available                                      |               | -           |
|                                       |                                                             |               |                                                               |               |             |
|                                       | Aspiration hazard:                                          |               | No information available.                                     |               |             |
|                                       |                                                             |               |                                                               |               |             |
|                                       | Irritation and corrosion                                    |               |                                                               |               |             |
|                                       | Exposure time                                               | Species       | Evaluation                                                    | Method        | Note        |
| Skin corrosion/irritation:            | -                                                           | -             | -                                                             | -             | -           |

|               |                                        |                      |              |          |   |
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|                               |   |   |   |   |   |
|-------------------------------|---|---|---|---|---|
| Serious eye damage/irritation | - | - | - | - | - |
|-------------------------------|---|---|---|---|---|

|               |
|---------------|
| Sensitization |
|---------------|

|                            |                           |
|----------------------------|---------------------------|
| Skin sensitization:        | No information available. |
| Respiratory sensitization: | No information available. |

|                                                                              |
|------------------------------------------------------------------------------|
| Symptoms related to the physical, chemical and toxicological characteristics |
|------------------------------------------------------------------------------|

|                      |                           |
|----------------------|---------------------------|
| Oral exposure:       | No information available. |
| Dermal exposure:     | No information available. |
| Inhalation exposure: | No information available. |
| Eye exposure:        | No information available. |

|                                                        |
|--------------------------------------------------------|
| Repeated dose toxicity (subacute, subchronic, chronic) |
|--------------------------------------------------------|

|                       | Dose                     | Exposure time            | Species                  | Method                   | Evaluation               | Note |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Subacute oral         | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute dermal       | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute inhalation   | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic oral       | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic dermal     | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic oral          | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic dermal        | No information available | No information available | No information available | No information available | No information available | -    |

|               |                                        |                      |              |          |   |
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|                       |                                                                    |                          |                          |                                                                   |                          |      |
|-----------------------|--------------------------------------------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------|--------------------------|------|
| Chronic inhalation    | No information available                                           | No information available | No information available | No information available                                          | No information available | -    |
|                       |                                                                    |                          |                          |                                                                   |                          |      |
|                       | Specific target organ toxicity – repeated exposure (STOT RE):      |                          |                          |                                                                   |                          |      |
|                       | Specific effects                                                   |                          |                          | Target organ                                                      |                          | Note |
| Subacute oral         | No information available                                           |                          |                          | No information available                                          |                          | -    |
| Subacute dermal       | No information available                                           |                          |                          | No information available                                          |                          | -    |
| Subacute inhalation   | No information available                                           |                          |                          | No information available                                          |                          | -    |
| Subchronic oral       | No information available                                           |                          |                          | No information available                                          |                          | -    |
| Subchronic dermal     | No information available                                           |                          |                          | No information available                                          |                          | -    |
| Subchronic inhalation | No information available                                           |                          |                          | No information available                                          |                          | -    |
| Chronic oral          | No information available                                           |                          |                          | No information available                                          |                          | -    |
| Chronic dermal        | No information available                                           |                          |                          | No information available                                          |                          | -    |
| Chronic inhalation    | No information available                                           |                          |                          | No information available                                          |                          | -    |
|                       |                                                                    |                          |                          |                                                                   |                          |      |
|                       | CMR effects (carcinogenicity; mutagenicity; reproductive toxicity) |                          |                          |                                                                   |                          |      |
|                       | Carcinogenicity:                                                   |                          |                          | Based on available data, the classification criteria are not met. |                          |      |
|                       | Mutagenicity <i>in vitro</i> :                                     |                          |                          | Based on available data, the classification criteria are not met. |                          |      |
|                       | Genotoxicity:                                                      |                          |                          | Based on available data, the classification criteria are not met. |                          |      |
|                       | Mutagenicity <i>in vivo</i> :                                      |                          |                          | Based on available data, the classification criteria are not met. |                          |      |
|                       | Germ cell mutagenicity:                                            |                          |                          | Based on available data, the classification criteria are not met. |                          |      |
|                       | Reproductive toxicity:                                             |                          |                          | Based on available data, the classification criteria are not met. |                          |      |
|                       |                                                                    |                          |                          |                                                                   |                          |      |
|                       | Summary of evaluation of the CMR properties:                       |                          |                          | Based on available data, the classification criteria are not met. |                          |      |
|                       |                                                                    |                          |                          |                                                                   |                          |      |
| 11.2                  | Practical experiences:                                             |                          |                          |                                                                   |                          |      |
|                       | Classification observations:                                       |                          |                          | No information available                                          |                          |      |
|                       | Other observations:                                                |                          |                          | No information available                                          |                          |      |
|                       |                                                                    |                          |                          |                                                                   |                          |      |
| 11.3                  | General notes:                                                     |                          |                          |                                                                   |                          |      |
|                       | -                                                                  |                          |                          |                                                                   |                          |      |

|                                           |          |
|-------------------------------------------|----------|
| <b>SECTION 12. Ecological information</b> |          |
| 12.1                                      | Toxicity |

|               |                                        |                      |              |          |   |
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| Acute (short-term) toxicity  | Dose             | Exposure time | Species                  | Method                   | Evaluation               | Note |
|------------------------------|------------------|---------------|--------------------------|--------------------------|--------------------------|------|
| Fish                         | LC <sub>50</sub> | 96 hours      | No information available | No information available | No information available | -    |
| Crustacea:                   | EC <sub>50</sub> | 48 hours      | No information available | No information available | No information available | -    |
| Algae/aquatic plants         | IC <sub>50</sub> | 4 days        | No information available | No information available | No information available | -    |
| Other organisms              | -                | -             | -                        | -                        | -                        | -    |
| Chronic (long-term) toxicity | Dose             | Exposure time | Species                  | Method                   | Evaluation               | Note |
| Fish                         | LC <sub>50</sub> | 96 hours      | No information available | No information available | No information available | -    |
| Crustacea:                   | EC <sub>50</sub> | 48 hours      | No information available | No information available | No information available | -    |
| Algae/aquatic plants         | IC <sub>50</sub> | 72 hours      | No information available | No information available | No information available | -    |
| Other organisms              | -                | -             | -                        | -                        | -                        | -    |

## 12.2 Persistence and degradability

### Abiotic degradation

|              | Degradation half-lives   | Method                   | Evaluation               | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | -    |
| Fresh water  | No information available | No information available | No information available | -    |
| Air          | No information available | No information available | No information available | -    |
| Soil         | No information available | No information available | No information available | -    |

### Biodegradation

| % Degradation            | Time (days)              | Method                   | Evaluation               | Note                     |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |

|               |                                        |                      |              |          |   |
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|                                                  |                                                                |                          |                          |                          |                          |      |  |
|--------------------------------------------------|----------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|--|
|                                                  |                                                                |                          |                          |                          |                          |      |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
| 12.3                                             | Bioaccumulative potential                                      |                          |                          |                          |                          |      |  |
|                                                  | Octanol-water partition coefficient (log Kow)                  |                          |                          |                          |                          |      |  |
| Value                                            | Concentration                                                  | pH                       | °C                       | Method                   | Evaluation               | Note |  |
| -                                                | -                                                              | -                        | -                        | -                        | -                        | -    |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
|                                                  | Bioconcentration factor (BCF)                                  |                          |                          |                          |                          |      |  |
| Value                                            | Species                                                        |                          | Method                   |                          | Evaluation               | Note |  |
| No information available                         | No information available                                       | information              | No information available | No information available | No information available | -    |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
|                                                  | Chronic ecotoxicity                                            |                          |                          |                          |                          |      |  |
| Value                                            | Dose                                                           | Exposure time            | Species                  | Method                   | Evaluation               | Note |  |
| Chronic toxicity on fish                         | LC <sub>50</sub>                                               | No information available | No information available | No information available | No information available | -    |  |
| Chronic toxicity on crustacea ( <i>Daphnia</i> ) | EC <sub>50</sub>                                               | No information available | No information available | No information available | No information available | -    |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
| 12.4                                             | Mobility in soil                                               |                          |                          |                          |                          |      |  |
|                                                  | Known or predicted distribution in environmental compartments: |                          |                          |                          |                          |      |  |
|                                                  | No information available                                       |                          |                          |                          |                          |      |  |
|                                                  | Surface tension:                                               |                          |                          |                          |                          |      |  |
|                                                  | Value                                                          | °C                       | Concentration            | Method                   |                          | Note |  |
|                                                  | No information available                                       | No information available | No information available | No information available |                          | -    |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |
|                                                  |                                                                |                          |                          |                          |                          |      |  |

|               |                                        |                      |              |          |   |
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|                         |                                     |                          |                          |                          |      |
|-------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|------|
| Adsorption / desorption |                                     |                          |                          |                          |      |
| Transport               | A/D coefficient<br>Henry's constant | log Kow                  | Evaporation rate         | Method                   | Note |
| Soil-water              | No information available            | No information available | No information available | No information available | -    |
| Water-air               | No information available            | No information available | No information available | No information available | -    |
| Soil-air                | No information available            | No information available | No information available | No information available | -    |

#### 12.5 Results of PBT and vPvB assessment

Not applicable.

#### 12.6 Other adverse effects

No further relevant information available.

### SECTION 13. Disposal considerations

#### 13.1 Waste treatment methods

##### 13.1.1. Product/Packaging disposal:

Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.

##### 13.1.2. Waste codes/waste designations according to Law:

15 01 10\*: Packaging that contains residual hazardous substances or is contaminated with hazardous substances

##### 13.1.3. Waste treatment – relevant information:

No information available

##### 13.1.4. Sewage disposal – relevant information:

Waste must not be disposed of into the sewage system.

##### 13.1.5. Other disposal recommendations:

Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge.

##### 13.1.6. Relevant Community provisions:

|               |                                        |                      |              |          |   |
|---------------|----------------------------------------|----------------------|--------------|----------|---|
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Disposal must be made according to official regulations.

#### SECTION 14 TRANSPORT INFORMATION

##### Transporting/shipment by road (ADR)

|                               |                  |
|-------------------------------|------------------|
| UN number:                    | 1170             |
| UN proper shipping name:      | Ethanol solution |
| Transport hazard class(es):   | 3                |
| Packing group:                | II               |
| Environmentally hazardous:    | -                |
| Special precautions for user: | -                |

##### Transporting/shipment by rail (RID)

|                               |                  |
|-------------------------------|------------------|
| UN number:                    | 1170             |
| UN proper shipping name:      | Ethanol solution |
| Transport hazard class(es):   | 3                |
| Packing group:                | II               |
| Environmentally hazardous:    | -                |
| Special precautions for user: | -                |

##### Inland waterway transport (ADN)

|                               |                  |
|-------------------------------|------------------|
| UN number:                    | 1170             |
| UN proper shipping name:      | Ethanol solution |
| Transport hazard class(es):   | 3                |
| Packing group:                | II               |
| Environmentally hazardous:    | -                |
| Special precautions for user: | -                |

##### Transporting/shipment by sea (IMDG)

|                                                                           |                  |
|---------------------------------------------------------------------------|------------------|
| UN number:                                                                | 1170             |
| UN proper shipping name:                                                  | Ethanol solution |
| Transport hazard class(es):                                               | 3                |
| Packing group:                                                            | II               |
| Environmentally hazardous:                                                | -                |
| Special precautions for user:                                             | -                |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: | -                |

##### Transporting/shipment by air (ICAO-TI/IATA-DGR)

|                          |                  |
|--------------------------|------------------|
| UN number:               | 1170             |
| UN proper shipping name: | Ethanol solution |

|               |                                        |                      |              |          |   |
|---------------|----------------------------------------|----------------------|--------------|----------|---|
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|                               |    |
|-------------------------------|----|
| Transport hazard class(es):   | 3  |
| Packing group:                | II |
| Environmentally hazardous:    | -  |
| Special precautions for user: | -  |
|                               |    |
| Further information:          | -  |

| <b>SECTION 15. Regulatory information</b> |                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15.1                                      | Safety, health and environmental regulations/legislation specific for the substance or mixture               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | EU regulations                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | Authorization and/or restrictions of use                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | Authorizations:                                                                                              | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           | Restrictions:                                                                                                | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                           | Other EU regulations:                                                                                        | <p>EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council;</p> <p>Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH);</p> <p>EC Regulation No. 2037/2000 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer;</p> <p>EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals;</p> <p>EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants;</p> <p>Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives</p> |
|                                           | Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | National legislation:                                                                                        | <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 15.2                                      | Chemical safety assessment                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                           | None                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| <b>SECTION 16. Other information</b> |                        |   |
|--------------------------------------|------------------------|---|
| 16.1                                 | Indication of changes: | - |

|               |                                        |                      |              |          |   |
|---------------|----------------------------------------|----------------------|--------------|----------|---|
| Trading name: | <b>HCL REAGENT, WEIGERT-VAN GIESON</b> |                      |              |          |   |
| Product code: | HCLW-OT-X**                            | Date of compilation: | 27 June 2019 | Version: | 3 |

|                |                                                                                                                         |                                                                                                                                                                                                                                                                                    |                                                  |
|----------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| 16.2           | Abbreviations and acronyms:                                                                                             | PBT                                                                                                                                                                                                                                                                                | Stable, bioaccumulative and toxic                |
|                |                                                                                                                         | vPvB                                                                                                                                                                                                                                                                               | Strongly stable and strongly bioaccumulative.    |
|                |                                                                                                                         | LD <sub>50</sub>                                                                                                                                                                                                                                                                   | Lethal dose, 50%                                 |
|                |                                                                                                                         | LC <sub>50</sub>                                                                                                                                                                                                                                                                   | Lethal concentration, 50%                        |
|                |                                                                                                                         | TCOJ                                                                                                                                                                                                                                                                               | Specific target organ toxicity - single exposure |
| 16.3.          | Key literature references and source of data:                                                                           | -                                                                                                                                                                                                                                                                                  |                                                  |
| 16.4.          | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) |                                                                                                                                                                                                                                                                                    |                                                  |
| Classification |                                                                                                                         | Classification procedure                                                                                                                                                                                                                                                           |                                                  |
| -              |                                                                                                                         | -                                                                                                                                                                                                                                                                                  |                                                  |
| 16.5.          | Relevant H statements (number and full text)                                                                            |                                                                                                                                                                                                                                                                                    |                                                  |
|                | H:                                                                                                                      | H225                                                                                                                                                                                                                                                                               | Highly flammable liquid and vapor.               |
|                |                                                                                                                         | H314                                                                                                                                                                                                                                                                               | Causes severe skin burns and eye damage.         |
|                |                                                                                                                         | H331                                                                                                                                                                                                                                                                               | Toxic if inhaled.                                |
| 16.6.          | Training advice:                                                                                                        | -                                                                                                                                                                                                                                                                                  |                                                  |
| 16.7.          | Further information:                                                                                                    | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |                                                  |

|                                                                         |
|-------------------------------------------------------------------------|
| <b>ANNEX: Exposure scenario resulting to chemical safety assessment</b> |
| -                                                                       |

|               |                               |                      |              |          |   |
|---------------|-------------------------------|----------------------|--------------|----------|---|
| Trade name:   | <b>HEMATOXYLIN, WEIGERT A</b> |                      |              |          |   |
| Product code: | HEMA-OT-X**                   | Date of compilation: | 03 June 2019 | Version: | 4 |

| SECTION 1. Identification of the substance/mixture and of the company/undertaking |                                                                               |                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1.                                                                              | Product identifier                                                            |                                                                                                                                                                                                                |
|                                                                                   | Trade name:                                                                   | HEMATOXYLIN, WEIGERT A                                                                                                                                                                                         |
|                                                                                   | Chemical name:                                                                | -                                                                                                                                                                                                              |
|                                                                                   | Catalogue number:                                                             | HEMA-OT-X**                                                                                                                                                                                                    |
| 1.2.                                                                              | Relevant identified uses of the substance or mixture and uses advised against |                                                                                                                                                                                                                |
|                                                                                   | Uses:                                                                         | For use in Hematoxylin W kit.                                                                                                                                                                                  |
|                                                                                   | Uses advised against:                                                         | Only the identified uses are advised.                                                                                                                                                                          |
|                                                                                   | Reason why uses advised against:                                              | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes. |
| 1.3.                                                                              | Details of the supplier of the safety data sheet                              |                                                                                                                                                                                                                |
|                                                                                   | Supplier:                                                                     | BioGnost Ltd.                                                                                                                                                                                                  |
|                                                                                   | Address:                                                                      | Medjugorska 59, Zagreb                                                                                                                                                                                         |
|                                                                                   | Telephone number:                                                             | +385 1 2409997                                                                                                                                                                                                 |
|                                                                                   | Telefax:                                                                      | +385 1 2404039                                                                                                                                                                                                 |
|                                                                                   | e-mail of competent person:                                                   | <a href="mailto:msds@biognost.hr">msds@biognost.hr</a>                                                                                                                                                         |
|                                                                                   | National contact:                                                             | -                                                                                                                                                                                                              |
| 1.4.                                                                              | Emergency telephone number                                                    |                                                                                                                                                                                                                |
|                                                                                   | National Protection and Rescue Directorate:                                   | 112                                                                                                                                                                                                            |
|                                                                                   | Medical information:                                                          | +385 1 2348 342                                                                                                                                                                                                |
|                                                                                   | Other information:                                                            | -                                                                                                                                                                                                              |

| SECTION 2. Hazards identification                                  |                                                                |                        |
|--------------------------------------------------------------------|----------------------------------------------------------------|------------------------|
| 2.1.                                                               | Classification of the substance or mixture                     |                        |
| 2.1.1.                                                             | Classification according to Regulation (EC) No 1272/2008 (CLP) |                        |
|                                                                    | Hazard class and category code:                                | Hazard statements*:    |
|                                                                    | Flam. Liq. 2                                                   | H225                   |
|                                                                    | Skin. Sens. 1                                                  | H317                   |
|                                                                    | Canc. 2                                                        | H351                   |
| 2.1.2.                                                             | Additional information                                         |                        |
|                                                                    | -                                                              |                        |
| *For full text of Hazard- and EU Hazard-statements: see Section 16 |                                                                |                        |
| 2.2.                                                               | Label elements                                                 |                        |
|                                                                    | Product identification:                                        | HEMATOXYLIN, WEIGERT A |
|                                                                    | Identification number:                                         | -                      |

|               |                               |                      |              |          |   |
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| Trade name:   | <b>HEMATOXYLIN, WEIGERT A</b> |                      |              |          |   |
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|                                      |                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Authorisation number:                | -                                                                                                                                                                                                                                                                                                                                          |
| Hazard pictograms:                   | <div style="text-align: center;"> <br/> GHS02<br/> <br/> GHS07<br/> <br/> GHS08 </div> |
| Signal word:                         | Danger                                                                                                                                                                                                                                                                                                                                     |
| Hazard statements:                   | H225 Highly flammable liquid and vapor.<br>H317 May cause an allergic skin reaction.<br>H351 Suspected of causing cancer.                                                                                                                                                                                                                  |
| Precautionary statement:             | P210 Keep away from heat/sparks/open flames/hot surfaces. Do not smoke.<br>P280 Wear protective gloves/protective clothing/eye/protection/face protection.<br>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.                              |
| Supplemental hazard information (EU) | -                                                                                                                                                                                                                                                                                                                                          |
| 2.3. Other hazards                   |                                                                                                                                                                                                                                                                                                                                            |
|                                      | -                                                                                                                                                                                                                                                                                                                                          |

**SECTION 3. Composition/information on ingredients**

| CAS/<br>EC/<br>Index number             | REACH<br>Registration<br>No | Weight % content<br>(or range) | Identification name | Classification (REGULATION)<br>(EC) No 1272/2008 (CLP) |
|-----------------------------------------|-----------------------------|--------------------------------|---------------------|--------------------------------------------------------|
| 107-21-1/<br>203-473-3/<br>603-027-00-1 | 01-2119456816-<br>28-xxxx   | < 10                           | ethylene glycol     | Acute Tox. 4, H302                                     |

|               |                               |                      |              |          |   |
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|                                                                                                                              |                           |      |                |                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------|------|----------------|-------------------------------------------------------------------------------------------------------------------------|
| 64-17-5/<br>200-578-6/<br>603-002-00-5<br>121-79-9/<br>204-498-2/<br>607-198-00-3<br>123-31-9/<br>204-617-8/<br>604-005-00-4 | 01-2119457610-<br>43-xxxx | ≥ 50 | ethanol        | Flam. Liq. 2, H225                                                                                                      |
|                                                                                                                              | -                         | < 3  | propyl gallate | Acute Tox. 4, H302<br>Skin Sens. 1 H317                                                                                 |
|                                                                                                                              | -                         | < 5  | hydroquinone   | Acute Tox. 4; H302<br>Canc. 2; H351<br>Eye Dam. 1; H318<br>Skin Sens. 1; H317<br>Aquatic Acute 1; H400<br>Muta. 2; H341 |

| <b>SECTION 4. First aid measures</b> |                                                                            |                                                                                                                                                                                                                                                                                     |
|--------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1.                                 | Description of first aid measures                                          |                                                                                                                                                                                                                                                                                     |
|                                      | General notes:                                                             | If the suggested first aid measures do not prove sufficient, seek medical attention.                                                                                                                                                                                                |
|                                      | Following inhalation:                                                      | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen.                                                                                                 |
|                                      | Following skin contact:                                                    | Remove contaminated clothing. Thoroughly wash with water for 15 minutes.                                                                                                                                                                                                            |
|                                      | Following eye contact:                                                     | Rinse the eyes using mild jet of clean water for at least 15 minutes with the eyelids held wide open.                                                                                                                                                                               |
|                                      | Following ingestion:                                                       | Rinse the mouth thoroughly with water. If the afflicted person is conscious, provide them with large amounts of water. Consult a physician.                                                                                                                                         |
|                                      | Self-protection of the first aider                                         | -                                                                                                                                                                                                                                                                                   |
| 4.2.                                 | Most important symptoms and effects, both acute and delayed                |                                                                                                                                                                                                                                                                                     |
|                                      | Following inhalation:                                                      | May cause eye irritation and upper respiratory system (stinging sensation, irritation). Bronchoconstriction is possible. Possible symptoms include CNS symptoms such as headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. |
|                                      | Following skin contact:                                                    | Defatting, dry skin.                                                                                                                                                                                                                                                                |
|                                      | Following eye contact:                                                     | Splatter may cause discomfort, stinging sensation, conjunctival redness, corneal surface lesions.                                                                                                                                                                                   |
|                                      | Following ingestion:                                                       | It may lead to occurrence of strong sensation of stinging, headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. If denaturants are present, dyspepsia may occur (such as vomiting).                                          |
| 4.3.                                 | Indication of any immediate medical attention and special treatment needed |                                                                                                                                                                                                                                                                                     |

|               |                               |                      |              |          |   |
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|                          |
|--------------------------|
| No information available |
|--------------------------|

| SECTION 5. Firefighting measures |                                                                                                                                                                   |                                                                                                                                     |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 5.1.                             | Extinguishing media                                                                                                                                               |                                                                                                                                     |
|                                  | Suitable extinguishing media:                                                                                                                                     | Small fire - water spray, dry powder, alcohol-resistant foam, CO <sub>2</sub><br>Large fire - water spray or alcohol-resistant foam |
|                                  | Unsuitable extinguishing media:                                                                                                                                   | Water jet                                                                                                                           |
| 5.2.                             | Special hazards arising from the substance or mixture                                                                                                             |                                                                                                                                     |
|                                  | Hazardous combustion products:                                                                                                                                    | Incomplete combustion of the product.                                                                                               |
| 5.3.                             | Advice for firefighters                                                                                                                                           |                                                                                                                                     |
|                                  | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing.<br>Cool closed containers exposed to fire with water spray or vapor. |                                                                                                                                     |
| 5.4.                             | Additional information                                                                                                                                            |                                                                                                                                     |
|                                  | -                                                                                                                                                                 |                                                                                                                                     |

| SECTION 6. Accidental release measures |                                                                                                                                                                                               |                                                                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1.                                   | Personal precautions, protective equipment and emergency procedures                                                                                                                           |                                                                                                                                                                                                                                   |
| 6.1.1.                                 | For non-emergency personnel                                                                                                                                                                   |                                                                                                                                                                                                                                   |
|                                        | Protective equipment:                                                                                                                                                                         | When disposing of small quantities use protective clothing. When disposing of large quantities use self-contained open-circuit compressed air breathing apparatus or self-contained closed-circuit air breathing apparatus.       |
|                                        | Accident prevention methods:                                                                                                                                                                  | Secure a safety zone, remove all ignition sources, and in case of an accident inform the Emergency service (112) and the manufacturer or sender. Position a prohibition sign with symbols of flame and devices that cause sparks. |
|                                        | Emergency procedures:                                                                                                                                                                         | Remove or neutralize all factors that may exacerbate the condition, use all allowed means of containing the situation and use recommended means of personal protection.                                                           |
| 6.1.2.                                 | For emergency responders:                                                                                                                                                                     |                                                                                                                                                                                                                                   |
|                                        | Self-contained open-circuit compressed air breathing apparatus, a set for protecting the body from heat dissipation (fireproof clothing).                                                     |                                                                                                                                                                                                                                   |
| 6.2.                                   | Environmental precautions:                                                                                                                                                                    |                                                                                                                                                                                                                                   |
|                                        | Use sand protective barrier to prevent further spillage of chemicals. Prevent environmental pollution by not allowing the chemicals to enter the sewage system, surface water or groundwater. |                                                                                                                                                                                                                                   |
| 6.3.                                   | Methods and material for containment and cleaning up                                                                                                                                          |                                                                                                                                                                                                                                   |
| 6.3.1.                                 | Bunding, covering of drains; capping procedures:                                                                                                                                              | Sand protective barrier or barriers made of similar materials                                                                                                                                                                     |
| 6.3.2.                                 | Cleaning up:                                                                                                                                                                                  | Sawdust, sand, mineral adsorbents                                                                                                                                                                                                 |

|               |                               |                      |              |          |   |
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|        |                             |                                                                                                                                                                        |
|--------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.3.3. | Other information:          | Secure proper ventilation. Contact the responsible person; in case of larger spills and possible environmental pollution contact National Protection and Rescue (112). |
| 6.4.   | Reference to other sections |                                                                                                                                                                        |
|        | -                           |                                                                                                                                                                        |

| SECTION 7. Handling and storage |                                                                                                  |                                                                                                                                                                             |
|---------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1.                            | Precautions for safe handling                                                                    |                                                                                                                                                                             |
| 7.1.1.                          | Protection measures                                                                              |                                                                                                                                                                             |
|                                 | Measures to prevent fire:                                                                        | Keep away from sources of ignition and heat. Do not use tools that cause sparks.                                                                                            |
|                                 | Measures to prevent aerosol and dust generation:                                                 | Secure proper ventilation.                                                                                                                                                  |
|                                 | Measures to protect the environment:                                                             | Prevent spilling into the sewage system and waterways.                                                                                                                      |
|                                 | Other measures:                                                                                  | -                                                                                                                                                                           |
| 7.1.2.                          | Advice on general occupational hygiene:                                                          |                                                                                                                                                                             |
|                                 | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. |                                                                                                                                                                             |
| 7.2.                            | Conditions for safe storage, including any incompatibilities                                     |                                                                                                                                                                             |
|                                 | Technical measures and storage conditions:                                                       | Keep in a well-ventilated place. Keep away from heat and direct solar radiation.                                                                                            |
|                                 | Packaging materials:                                                                             | Manufacturer's original packaging.                                                                                                                                          |
|                                 | Requirements for storage rooms and vessels:                                                      | Keep away from food and drink. Keep the containers tightly closed.                                                                                                          |
|                                 | Advices for storage equipment:                                                                   | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |
|                                 | Further information on storage conditions:                                                       | -                                                                                                                                                                           |
| 7.3.                            | Specific end use(s)                                                                              |                                                                                                                                                                             |
|                                 | Recommendations:                                                                                 | -                                                                                                                                                                           |
|                                 | Industrial sector specific solutions:                                                            | -                                                                                                                                                                           |

| SECTION 8. Exposure controls/personal protection |                    |                                                      |                   |                         |
|--------------------------------------------------|--------------------|------------------------------------------------------|-------------------|-------------------------|
| 8.1.                                             | Control parameters |                                                      |                   |                         |
| Substance                                        | CAS No             | Occupational exposure limit values/short term values |                   | Biological limit values |
|                                                  |                    | ppm                                                  | mg/m <sup>3</sup> |                         |
| Ethanol                                          | 64-17-5            | 1000/-                                               | 1900/-            | -                       |
| Ethylene glycol                                  | 107-21-1           | 20/40                                                | 52/104            | -                       |

|               |                               |                      |              |          |   |
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|              |          |      |     |   |
|--------------|----------|------|-----|---|
| Hydroquinone | 123-31-9 | -/05 | -/- | - |
|--------------|----------|------|-----|---|

|            |   |
|------------|---|
| Substance: | - |
|------------|---|

|        |   |         |   |
|--------|---|---------|---|
| EC No: | - | CAS No: | - |
|--------|---|---------|---|

### **DNEL**

#### **Industrial**

| <b>Route of exposure:</b> | Acute effect local | Acute effect systemic | Chronic effect local           | Chronic effect systemic                            |
|---------------------------|--------------------|-----------------------|--------------------------------|----------------------------------------------------|
| Oral                      | -                  | -                     | -                              | -                                                  |
| Inhalation                | -                  | -                     | 35 mg/ kg<br>(ethylene glycol) | 950 mg/m <sup>3</sup> (ethanol)                    |
| Dermal                    | -                  | -                     | -                              | 343 mg/kg (ethanol)<br>106 mg/kg (ethylene glycol) |

Critical physical parameters: solubility, flammability, corrosivity:

#### **Consumer**

| <b>Route of exposure:</b> | Acute effect local | Acute effect systemic | Chronic effect local         | Chronic effect systemic                           |
|---------------------------|--------------------|-----------------------|------------------------------|---------------------------------------------------|
| Oral                      | -                  | -                     | -                            | -                                                 |
| Inhalation                | -                  | -                     | 7 mg/kg<br>(ethylene glycol) | 114 mg/m <sup>3</sup> (ethanol)                   |
| Dermal                    | -                  | -                     | -                            | 206 mg/kg (ethanol)<br>53 mg/kg (ethylene glycol) |

### **PNEC**

| Environmental protection target    | <b>PNEC</b>                                          |
|------------------------------------|------------------------------------------------------|
| Fresh water                        | 0.96 mg/l (ethanol)<br>10 mg/l (ethylene glycol)     |
| Freshwater sediments               | 3.6 mg/kg (ethanol)<br>37 mg/kg (ethylene glycol)    |
| Marine water                       | 0.79 mg/l (ethanol)<br>1 mg/l (ethylene glycol)      |
| Marine sediments                   | 3.7 mg/kg (ethylene glycol)                          |
| Food chain                         | no information available                             |
| Microorganisms in sewage treatment | 199.5 mg/l (ethylene glycol)                         |
| Soil (agricultural)                | 0.63 mg/kg (ethanol)<br>1.53 mg/kg (ethylene glycol) |
| Air                                | no information available                             |

|               |                               |                      |              |          |   |
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|          |                                                                                |                                                                                                                                                                                                                                                                                                             |
|----------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                                                |                                                                                                                                                                                                                                                                                                             |
| 8.2.     | Exposure controls                                                              |                                                                                                                                                                                                                                                                                                             |
| 8.2.1.   | Engineering measures                                                           |                                                                                                                                                                                                                                                                                                             |
|          | Substance/mixture related measures to prevent exposure during identified uses: | Use personal protective equipment. Do not eat, drink or smoke in the workspace.                                                                                                                                                                                                                             |
|          | Structural measures to prevent exposure:                                       | No information available                                                                                                                                                                                                                                                                                    |
|          | Organisational measures to prevent exposure:                                   | Organization of work in order to reduce other worker's influence during work process.                                                                                                                                                                                                                       |
|          | Technical measures to prevent exposure:                                        | See Section 7.2                                                                                                                                                                                                                                                                                             |
| 8.2.2.   | Personal protection equipment                                                  |                                                                                                                                                                                                                                                                                                             |
| 8.2.2.1. | Eye and face protection:                                                       | Safety glasses that stick to face (EN166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air.                                                                                                       |
| 8.2.2.2. | Skin protection                                                                |                                                                                                                                                                                                                                                                                                             |
|          | Hand protection:                                                               | In case of coming into thorough contact, use butyl rubber gloves (0.4 mm thick). In case of contact with drops, use polychlorene gloves (0.1 mm thick).<br>Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374.                                                        |
|          | Other skin protection:                                                         | During everyday work use cotton clothing and suitable footwear, such as rubber boots or shoes that cover the entire foot. In case of spilling hazard, use clothing made of impermeable material suitable for protection from liquid chemicals (Viton, PVC, himex) and footwear made from the same material. |
| 8.2.2.3. | Respiratory protection:                                                        | If the concentration level exceeds the GVI values, use full gas mask equipped with brown filter A.                                                                                                                                                                                                          |
| 8.2.2.4. | Thermal hazards:                                                               | No information available                                                                                                                                                                                                                                                                                    |
| 8.2.3.   | Environmental exposure controls                                                |                                                                                                                                                                                                                                                                                                             |
|          | Substance/mixture related measures to prevent exposure:                        | See Section 6                                                                                                                                                                                                                                                                                               |
|          | Structural measures to prevent exposure:                                       | Use modern equipment.                                                                                                                                                                                                                                                                                       |
|          | Organisational measures to prevent exposure:                                   | Adapt the work process to the required working conditions of the workplace.                                                                                                                                                                                                                                 |
|          | Technical measures to prevent exposure:                                        | See Section 6                                                                                                                                                                                                                                                                                               |

|                                                    |                                                       |
|----------------------------------------------------|-------------------------------------------------------|
| <b>SECTION 9. Physical and chemical properties</b> |                                                       |
| 9.1.                                               | Information on basic physical and chemical properties |

|               |                               |                      |              |          |   |
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|                                                   | Value                       | Method                   |
|---------------------------------------------------|-----------------------------|--------------------------|
| Physical state:                                   | liquid                      | No information available |
| Colour:                                           | brown                       | No information available |
| Odour:                                            | ethanol like                | No information available |
| Odour threshold;                                  | No information available    | No information available |
| pH:                                               | No information available    | No information available |
| Melting point / freezing point;                   | No information available    | No information available |
| Initial boiling point and boiling range:          | No information available    | No information available |
| Flash point:                                      | 20°C                        | No information available |
| Evaporation rate:                                 | No information available    | No information available |
| Flammability (solid, gas):                        | No information available    | No information available |
| Upper/lower flammability or explosive limits:     | No information available    | No information available |
| Vapour pressure:                                  | No information available    | No information available |
| Vapour density:                                   | No information available    | No information available |
| Relative density:                                 | No information available    | No information available |
| Bulk density:                                     | No information available    | No information available |
| Solubility(ies):                                  | Completely soluble in water | No information available |
| Partition coefficient: n-octanol/water (log Kow): | No information available    | No information available |
| Auto-ignition temperature:                        | No information available    | No information available |
| Decomposition temperature:                        | No information available    | No information available |
| Viscosity:                                        | No information available    | No information available |
| Explosive properties:                             | No information available    | No information available |
| Oxidising properties:                             | No information available    | No information available |
| 9.2.                                              | Other information           |                          |
|                                                   | -                           |                          |

| SECTION 10.: Stability and reactivity |                                     |                                                                                                                           |
|---------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 10.1.                                 | Reactivity:                         | The product is stable under normal working and storage conditions.                                                        |
| 10.2.                                 | Chemical stability:                 | The product is chemically stable under standard ambient conditions of storing and using (room temperature).               |
| 10.3.                                 | Possibility of hazardous reactions: | Risk of explosion after contact with strong acids, alkali metals, alkali metal oxides, nitric acid, oxidizing substances. |
| 10.4.                                 | Conditions to avoid:                | High temperatures, ignition sources, open flame.                                                                          |
| 10.5.                                 | Incompatible materials:             | Oxidants, acids, alkali metals.                                                                                           |

|               |                               |                      |              |          |   |
|---------------|-------------------------------|----------------------|--------------|----------|---|
| Trade name:   | <b>HEMATOXYLIN, WEIGERT A</b> |                      |              |          |   |
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|       |                                   |                                                 |
|-------|-----------------------------------|-------------------------------------------------|
| 10.6. | Hazardous decomposition products: | Non-degradable if used in the described manner. |
|-------|-----------------------------------|-------------------------------------------------|

| SECTION 11. Toxicological information |                                                                                                                                                                                                                                            |         |                                                                                   |                  |                                                        |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------|------------------|--------------------------------------------------------|
| 11.1.                                 | Information on toxicological effects                                                                                                                                                                                                       |         |                                                                                   |                  |                                                        |
|                                       | Acute toxicity:                                                                                                                                                                                                                            |         |                                                                                   |                  |                                                        |
| Route of exposure:                    | Method                                                                                                                                                                                                                                     | Species | Effective dose<br>LD <sub>50</sub> /LC <sub>50</sub> or<br>ATE <sub>mixture</sub> | Exposure time    | Results                                                |
| Oral:                                 | No information available                                                                                                                                                                                                                   | rat     | LD <sub>50</sub>                                                                  | -                | 7.060 mg/kg (ethanol)<br>7.712 mg/kg (ethylene glycol) |
| Dermal:                               | No information available                                                                                                                                                                                                                   | rabbit  | LD <sub>50</sub>                                                                  | -                | >3.500mg/kg<br>(ethylene glycol)                       |
| Inhalation:                           | No information available                                                                                                                                                                                                                   | rat     | LC <sub>50</sub>                                                                  | 4 h<br>(ethanol) | 20.000 mg/l (ethanol)                                  |
|                                       |                                                                                                                                                                                                                                            |         |                                                                                   |                  |                                                        |
|                                       | Specific target organ toxicity – single exposure (STOT SE):                                                                                                                                                                                |         |                                                                                   |                  |                                                        |
|                                       | Specific effects                                                                                                                                                                                                                           |         | Target organ                                                                      |                  | Note                                                   |
| Oral:                                 | No information available                                                                                                                                                                                                                   |         | No information available                                                          |                  | -                                                      |
| Dermal:                               | No information available                                                                                                                                                                                                                   |         | No information available                                                          |                  | -                                                      |
| Inhalation:                           | No information available                                                                                                                                                                                                                   |         | No information available                                                          |                  | -                                                      |
|                                       |                                                                                                                                                                                                                                            |         |                                                                                   |                  |                                                        |
|                                       | Respiratory irritation:                                                                                                                                                                                                                    |         | May cause respiratory irritation.                                                 |                  |                                                        |
|                                       |                                                                                                                                                                                                                                            |         |                                                                                   |                  |                                                        |
|                                       | Irritation and corrosion                                                                                                                                                                                                                   |         |                                                                                   |                  |                                                        |
|                                       | Exposure time                                                                                                                                                                                                                              | Species | Evaluation                                                                        | Method           | Note                                                   |
| Skin corrosion/irritation:            | -                                                                                                                                                                                                                                          | -       | -                                                                                 | -                | No information available                               |
| Serious eye damage/irritation         | -                                                                                                                                                                                                                                          | -       | -                                                                                 | -                | No information available                               |
|                                       |                                                                                                                                                                                                                                            |         |                                                                                   |                  |                                                        |
|                                       | Sensitization:                                                                                                                                                                                                                             |         |                                                                                   |                  |                                                        |
| Skin sensitization:                   | No information available                                                                                                                                                                                                                   |         |                                                                                   |                  |                                                        |
| Respiratory sensitization:            | No information available                                                                                                                                                                                                                   |         |                                                                                   |                  |                                                        |
|                                       |                                                                                                                                                                                                                                            |         |                                                                                   |                  |                                                        |
|                                       | Symptoms related to the physical, chemical and toxicological characteristics                                                                                                                                                               |         |                                                                                   |                  |                                                        |
| Oral exposure:                        | It may lead to occurrence of strong sensation of stinging, headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. If denaturants are present, dyspepsia may occur (such as vomiting). |         |                                                                                   |                  |                                                        |

|               |                               |                      |              |          |   |
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|                      |                                                                                                                                                                                                                                                                                     |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dermal exposure:     | Defatting, dry skin.                                                                                                                                                                                                                                                                |
| Inhalation exposure: | May cause eye irritation and upper respiratory system (stinging sensation, irritation). Bronchoconstriction is possible. Possible symptoms include CNS symptoms such as headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. |
| Eye exposure:        | Splatter may cause discomfort, stinging sensation, conjunctival redness, corneal surface lesions.                                                                                                                                                                                   |

|                                                        |
|--------------------------------------------------------|
| Repeated dose toxicity (subacute, subchronic, chronic) |
|--------------------------------------------------------|

|                       | Dose                     | Exposure time            | Species                  | Method                   | Evaluation               | Note |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Subacute oral         | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute dermal       | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute inhalation   | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic oral       | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic dermal     | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic oral          | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic dermal        | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic inhalation    | No information available | No information available | No information available | No information available | No information available | -    |

|                                                               |
|---------------------------------------------------------------|
| Specific target organ toxicity – repeated exposure (STOT RE): |
|---------------------------------------------------------------|

|               | Specific effects         | Target organ             | Note |
|---------------|--------------------------|--------------------------|------|
| Subacute oral | No information available | No information available | -    |

|               |                               |                      |              |          |   |
|---------------|-------------------------------|----------------------|--------------|----------|---|
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|                       |                          |                          |   |
|-----------------------|--------------------------|--------------------------|---|
| Subacute dermal       | No information available | No information available | - |
| Subacute inhalation   | No information available | No information available | - |
| Subchronic oral       | No information available | No information available | - |
| Subchronic dermal     | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral          | No information available | No information available | - |
| Chronic dermal        | No information available | No information available | - |
| Chronic inhalation    | No information available | No information available | - |

|                                                                    |                          |  |  |
|--------------------------------------------------------------------|--------------------------|--|--|
| CMR effects (carcinogenicity; mutagenicity; reproductive toxicity) |                          |  |  |
| Carcinogenicity:                                                   | No information available |  |  |
| Mutagenicity <i>in-vitro</i> :                                     | No information available |  |  |
| Genotoxicity:                                                      | No information available |  |  |
| Mutagenicity <i>in-vivo</i> :                                      | No information available |  |  |
| Germ cell mutagenicity:                                            | No information available |  |  |
| Reproductive toxicity:                                             | No information available |  |  |
| Summary of evaluation of the CMR properties:                       | -                        |  |  |

|       |                                      |                          |
|-------|--------------------------------------|--------------------------|
| 11.2. | Practical experiences:               |                          |
|       | Remarks relevant for classification: | No information available |
|       | Other remarks:                       | No information available |
|       |                                      |                          |
| 11.3. | Note:                                |                          |
|       | -                                    |                          |

| SECTION 12. Ecological information: |                  |               |            |                          |                               |      |
|-------------------------------------|------------------|---------------|------------|--------------------------|-------------------------------|------|
| 12.1.                               | Toxicity         |               |            |                          |                               |      |
| Acute (short-term) toxicity         | Dose             | Exposure time | Species    | Method                   | Evaluation                    | Note |
| Fish                                | LC <sub>50</sub> | 96 hours      | Fish       | No information available | 72.860 mg/l (ethylene glycol) | -    |
| Crustacea:                          | EC <sub>50</sub> | 48 hours      | water flea | No information available | >100 mg/l (ethylene glycol)   | -    |

|               |                               |                      |              |          |   |  |
|---------------|-------------------------------|----------------------|--------------|----------|---|--|
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|                              |                  |               |                          |                          |                                     |      |
|------------------------------|------------------|---------------|--------------------------|--------------------------|-------------------------------------|------|
| Algae/aquatic plants         | IC <sub>50</sub> | 72 hours      | algae                    | No information available | 6.500-13.000 mg/l (ethylene glycol) | -    |
| Microorganisms               | -                | -             | No information available | No information available | No information available            | -    |
| Chronic (long-term) toxicity | Dose             | Exposure time | Species                  | Method                   | Evaluation                          | Note |
| Fish                         | LC <sub>50</sub> | 96 hours      | No information available | No information available | No information available            | -    |
| Crustacea:                   | EC <sub>50</sub> | 48 hours      | No information available | No information available | No information available            | -    |
| Algae/aquatic plants         | IC <sub>50</sub> | 72 hours      | No information available | No information available | No information available            | -    |
| Microorganisms               | -                | -             | -                        | -                        | -                                   | -    |

## 12.2. Persistence and degradability

### Abiotic degradation

|              | Degradation half-lives   | Method                   | Evaluation               | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | -    |
| Fresh water  | No information available | No information available | No information available | -    |
| Air          | No information available | No information available | No information available | -    |
| Soil         | No information available | No information available | No information available | -    |

### Biodegradation

| % Degradation | Time (days) | Method | Evaluation | Note |
|---------------|-------------|--------|------------|------|
| -             | -           | -      | -          | -    |
|               |             |        |            |      |
|               |             |        |            |      |

## 12.3. Bioaccumulative potential

### Partition coefficient: n-octanol/water (log Kow):

| Value | Concentration | pH | °C | Method | Evaluation | Note |
|-------|---------------|----|----|--------|------------|------|
| -     | -             | -  | -  | -      | -          | -    |

|               |                               |                      |              |          |   |
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|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|  |  |  |  |  |  |

|                               |                          |                          |                          |                          |
|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Bioconcentration factor (BCF) |                          |                          |                          |                          |
| Value                         | Species                  | Method                   | Evaluation               | Note                     |
| No information available      | No information available | No information available | No information available | No information available |
|                               |                          |                          |                          |                          |
|                               |                          |                          |                          |                          |

|                                         |                  |                          |                          |                          |                          |      |
|-----------------------------------------|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Chronic ecotoxicity                     |                  |                          |                          |                          |                          |      |
| Value                                   | Dose             | Exposure time            | Species                  | Method                   | Evaluation               | Note |
| Chronic toxicity on fish                | LC <sub>50</sub> | No information available | No information available | No information available | No information available | -    |
| Chronic toxicity on crustacea (Daphnia) | EC <sub>50</sub> | No information available | No information available | No information available | No information available | -    |

#### 12.4. Mobility in soil

|                                                                |                          |                          |                          |                          |      |
|----------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Known or predicted distribution in environmental compartments: |                          |                          |                          |                          |      |
| No information available                                       |                          |                          |                          |                          |      |
| Surface tension:                                               |                          |                          |                          |                          |      |
|                                                                | Value                    | °C                       | Concentration            | Method                   | Note |
|                                                                | No information available | No information available | No information available | No information available | -    |
|                                                                |                          |                          |                          |                          |      |
|                                                                |                          |                          |                          |                          |      |

|                         |                                     |                          |                          |                          |      |
|-------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|------|
|                         |                                     |                          |                          |                          |      |
| Adsorption / desorption |                                     |                          |                          |                          |      |
| Transport               | A/D coefficient<br>Henry's constant | log Kow                  | Evaporation rate         | Method                   | Note |
| Soil-water              | No information available            | No information available | No information available | No information available | -    |
| Water-air               | No information available            | No information available | No information available | No information available | -    |

|               |                               |                      |              |          |   |
|---------------|-------------------------------|----------------------|--------------|----------|---|
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|          |                          |                          |                          |                          |   |
|----------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| Soil-air | No information available | No information available | No information available | No information available | - |
|----------|--------------------------|--------------------------|--------------------------|--------------------------|---|

|       |                                    |
|-------|------------------------------------|
| 12.5. | Results of PBT and vPvB assessment |
|       | No information available           |

|       |                          |
|-------|--------------------------|
| 12.6. | Other adverse effects    |
|       | No information available |

### SECTION 13. Disposal considerations

|       |                         |
|-------|-------------------------|
| 13.1. | Waste treatment methods |
|-------|-------------------------|

|         |                                                                                                            |
|---------|------------------------------------------------------------------------------------------------------------|
| 13.1.1. | Product/Packaging disposal:                                                                                |
|         | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection. |

|         |                                                  |
|---------|--------------------------------------------------|
| 13.1.2. | Waste codes/waste designations according to Law: |
|         | No information available                         |

|         |                                         |
|---------|-----------------------------------------|
| 13.1.3. | Waste treatment – relevant information: |
|         | No information available                |

|         |                                                       |
|---------|-------------------------------------------------------|
| 13.1.4. | Sewage disposal – relevant information:               |
|         | Waste must not be disposed of into the sewage system. |

|         |                                                                                                                                                                                                                                                                                                                                       |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13.1.5. | Other disposal recommendations:                                                                                                                                                                                                                                                                                                       |
|         | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur. |

|         |                                |
|---------|--------------------------------|
| 13.1.6. | Relevant Community provisions: |
|         | -                              |

### SECTION 14. Transport information

|                             |                                     |
|-----------------------------|-------------------------------------|
|                             | Transporting/shipment by road (ADR) |
| UN number:                  | 1170                                |
| UN proper shipping name:    | Ethanol solution                    |
| Transport hazard class(es): | 3                                   |

|               |                               |                      |              |          |   |
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|                                                                           |                          |
|---------------------------------------------------------------------------|--------------------------|
| Packing group:                                                            | II                       |
| Environmental hazards:                                                    | No information available |
| Special precautions for user:                                             | -                        |
| Transporting/shipment by rail (RID)                                       |                          |
| UN number:                                                                | 1170                     |
| UN proper shipping name:                                                  | Ethanol solution         |
| Transport hazard class(es):                                               | 3                        |
| Packing group:                                                            | II                       |
| Environmental hazards:                                                    | No information available |
| Special precautions for user:                                             | -                        |
| Transporting/shipment by inland waterways (ADN)                           |                          |
| UN number:                                                                | 1170                     |
| UN proper shipping name:                                                  | Ethanol solution         |
| Transport hazard class(es):                                               | 3                        |
| Packing group:                                                            | II                       |
| Environmental hazards:                                                    | No information available |
| Special precautions for user:                                             | -                        |
| Transporting/shipment by sea (IMDG)                                       |                          |
| UN number:                                                                | 1170                     |
| UN proper shipping name:                                                  | Ethanol solution         |
| Transport hazard class(es):                                               | 3                        |
| Packing group:                                                            | II                       |
| Environmental hazards:                                                    | No information available |
| Special precautions for user:                                             | -                        |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: | -                        |
| Transporting/shipment by air (ICAO-TI/IATA-DGR)                           |                          |
| UN number:                                                                | 1170                     |
| UN proper shipping name:                                                  | Ethanol solution         |
| Transport hazard class(es):                                               | 3                        |
| Packing group:                                                            | II                       |
| Environmental hazards:                                                    | No information available |
| Special precautions for user:                                             | -                        |
| Further information:                                                      |                          |
| -                                                                         |                          |

|               |                               |                      |              |          |   |
|---------------|-------------------------------|----------------------|--------------|----------|---|
| Trade name:   | <b>HEMATOXYLIN, WEIGERT A</b> |                      |              |          |   |
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|       |                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|       | EU regulations                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|       | Authorization and/or restrictions of use                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|       | Authorizations:                                                                                              | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|       | Restrictions:                                                                                                | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|       | Other EU regulations:                                                                                        | EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council;<br>The European Commission Regulation No. 453/2006 of 2010 on changes and amendments to the Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH);<br>EC Regulation No. 2037/2000 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer;<br>EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals;<br>EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants;<br>Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives |
|       | Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|       | National legislation:                                                                                        | Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Transport of Hazardous Substances Act                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 15.2. | Chemical safety assessment                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|       | None                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| SECTION 16. Other information |                                                                                                                         |                                                             |                                                                                                                                                                                         |  |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 16.1.                         | Indication of changes:                                                                                                  |                                                             | -                                                                                                                                                                                       |  |
| 16.2.                         | Abbreviations and acronyms:                                                                                             | PBT<br>vPvB<br>LD <sub>50</sub><br>LC <sub>50</sub><br>TCOJ | Stable, bioaccumulative and toxic<br>Strongly stable and strongly bioaccumulative.<br>Lethal dose, 50%<br>Lethal concentration, 50%<br>Specific target organ toxicity - single exposure |  |
| 16.3.                         | Key literature references and source of data:                                                                           |                                                             | -                                                                                                                                                                                       |  |
| 16.4.                         | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) |                                                             |                                                                                                                                                                                         |  |
| Classification                |                                                                                                                         | Classification procedure                                    |                                                                                                                                                                                         |  |

|               |                               |                      |              |          |   |
|---------------|-------------------------------|----------------------|--------------|----------|---|
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|       |                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -     | -                                                                                                                                                                                                                                                                                                                                                                                                |
| 16.5. | Relevant H statements (number and full text)                                                                                                                                                                                                                                                                                                                                                     |
| H:    | <div> <div>225</div> <div>302</div> <div>317</div> <div>318</div> <div>341</div> <div>351</div> <div>400</div> </div> <div> <p>Highly flammable liquid and vapor.</p> <p>Harmful if swallowed.</p> <p>May cause an allergic skin reaction.</p> <p>Causes serious eye damage.</p> <p>Suspected of causing genetic defects.</p> <p>May cause cancer.</p> <p>Very toxic to aquatic life.</p> </div> |
| 16.6. | Training advice:                                                                                                                                                                                                                                                                                                                                                                                 |
|       | -                                                                                                                                                                                                                                                                                                                                                                                                |
| 16.7. | Further information:                                                                                                                                                                                                                                                                                                                                                                             |
|       | <p>** "X" in the product code marks different volumes (different packaging of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p>                                                                                                                |

|                                                                  |
|------------------------------------------------------------------|
| <b>ANNEX:</b>                                                    |
| <b>EXPOSURE SCENARIO RESULTING TO CHEMICAL SAFETY ASSESSMENT</b> |
| -                                                                |

|               |                                 |                |              |          |   |
|---------------|---------------------------------|----------------|--------------|----------|---|
| Trading name: | <b>FERRI REAGENT, WEIGERT B</b> |                |              |          |   |
| Product code: | FR-OT-X**                       | Revision date: | 03 June 2019 | Version: | 4 |

| SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING |                                                                               |                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1.                                                                             | Product identifier                                                            |                                                                                                                                                                                                               |
|                                                                                  | Trading name:                                                                 | FERRI REAGENT, WEIGERT B                                                                                                                                                                                      |
|                                                                                  | Chemical name:                                                                | -                                                                                                                                                                                                             |
|                                                                                  | Catalogue number:                                                             | FR-OT-X**                                                                                                                                                                                                     |
| 1.2.                                                                             | Relevant identified uses of the substance or mixture and uses advised against |                                                                                                                                                                                                               |
|                                                                                  | Uses:                                                                         | For use in Hematoxylin W kit.                                                                                                                                                                                 |
|                                                                                  | Uses advised against:                                                         | Only the identified uses are advised.                                                                                                                                                                         |
|                                                                                  | Reason why uses advised against:                                              | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes |
| 1.3.                                                                             | Details of the supplier of the safety data sheet                              |                                                                                                                                                                                                               |
|                                                                                  | Supplier:                                                                     | BioGnost Ltd.                                                                                                                                                                                                 |
|                                                                                  | Address:                                                                      | Medjugorska 59, Zagreb                                                                                                                                                                                        |
|                                                                                  | Telephone number:                                                             | +385 1 2409997                                                                                                                                                                                                |
|                                                                                  | Fax no.:                                                                      | +385 1 2404039                                                                                                                                                                                                |
|                                                                                  | e-mail of competent person:                                                   | <a href="mailto:msds@biognost.hr">msds@biognost.hr</a>                                                                                                                                                        |
|                                                                                  | National contact:                                                             | -                                                                                                                                                                                                             |
| 1.4.                                                                             | Emergency telephone number                                                    |                                                                                                                                                                                                               |
|                                                                                  | National Protection and Rescue Directorate:                                   | 112                                                                                                                                                                                                           |
|                                                                                  | Medical information:                                                          | +385 1 2348 342                                                                                                                                                                                               |
|                                                                                  | Other information:                                                            | -                                                                                                                                                                                                             |

| SECTION 2 HAZARDS INFORMATION                                      |                                                             |                          |
|--------------------------------------------------------------------|-------------------------------------------------------------|--------------------------|
| 2.1.                                                               | Classification of the substance or mixture                  |                          |
| 2.1.1.                                                             | Classification (REGULATION (EC) No. 1272/2008 (CLP)         |                          |
|                                                                    | Hazard class and category code:                             | Hazard statements*:      |
|                                                                    | Not identified as hazardous substance.                      | -                        |
| 2.1.2.                                                             | Additional information                                      |                          |
|                                                                    | -                                                           |                          |
| *For full text of Hazard- and EU Hazard-statements: see Section 16 |                                                             |                          |
| 2.2.                                                               | Classification according to EC Directive Nr. 1272/2008 CLP) |                          |
|                                                                    | Product identification:                                     | FERRI REAGENT, WEIGERT B |
|                                                                    | Identification number:                                      | -                        |
|                                                                    | Authorization no.:                                          | -                        |
|                                                                    | Hazard pictograms:                                          | -                        |
|                                                                    | Signal word:                                                | -                        |

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|------|---------------------------|---|
|      | Hazard statements:        | - |
|      | Precautionary statements: | - |
|      | Further information:      | - |
| 2.3. | Other hazards             |   |
|      | -                         |   |

| SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS |                           |                                |                            |                                                                      |
|--------------------------------------------------|---------------------------|--------------------------------|----------------------------|----------------------------------------------------------------------|
| CAS/<br>EC/<br>Index no.                         | REACH<br>Registration No  | Weight % content<br>(or range) | Identification name        | Classification according to<br>Regulation (EC) No<br>1272/2008 (CLP) |
| 7782-61-8/<br>616-509-1/<br>-                    | -                         | < 0.5%                         | ferric nitrate nonahydrate | Skin Irrit. 2; H315<br>Eye Irrit. 2; H319                            |
| 7647-01-0/<br>231-595-7/<br>017-002-00-2         | 01-2119484862-<br>27-xxxx | < 1%                           | hydrochloric acid, 37%     | Skin Corr. 1A; H314<br>Acute Tox. 3; H331                            |

| SECTION 4 FIRST AID MEASURES |                                                             |                                                                                                                                                                                                                                                   |
|------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1.                         | Description of first aid measures                           |                                                                                                                                                                                                                                                   |
|                              | General notes:                                              | -                                                                                                                                                                                                                                                 |
|                              | Following inhalation:                                       | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. If breathing becomes erratic or it stops, immediately apply artificial respiration (other than mouth-to-mouth) and contact a physician. |
|                              | Following skin contact:                                     | Remove contaminated clothing. Immediately wash with plenty of water and soap. Seek medical assistance if the symptoms of irritation remain.                                                                                                       |
|                              | Following eye contact:                                      | Rinse out with plenty of water with the eyelid held wide open using clean fingers. If the symptoms remain, immediately call a physician.                                                                                                          |
|                              | Following ingestion:                                        | Do not induce vomiting. Make the afflicted person drink a glass of water. If spontaneous vomiting occurs, wash the mouth with water, then make the person drink 100-200 ml of water and seek medical attention.                                   |
|                              | Self-protection of the first aider:                         | Treat symptomatically.                                                                                                                                                                                                                            |
| 4.2.                         | Most important symptoms and effects, both acute and delayed |                                                                                                                                                                                                                                                   |
|                              | Following inhalation:                                       | Inhalation of large amounts of vapors in inadequately ventilated perimeter may cause coughing, sneezing, headache and nausea.                                                                                                                     |
|                              | Following skin contact:                                     | Slight irritation. After short exposure, resorption effects are not likely. Long-term exposure may cause drying, cracking and tingling sensation of skin.                                                                                         |
|                              | Following eye contact:                                      | Direct eye contact may cause slight to moderate irritation, lacrimation and burning sensation.                                                                                                                                                    |

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|------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | Following ingestion:                                                       | Swallowing may cause irritation of mucosa, tingling sensation in the mouth, burning sensation; higher levels of concentration may cause nausea, abdominal pain and vomiting. In case of vomiting, aspiration causes coughing, difficult breathing. Higher levels of concentration may cause suffocation. |
| 4.3. | Indication of any immediate medical attention and special treatment needed |                                                                                                                                                                                                                                                                                                          |
|      | -                                                                          |                                                                                                                                                                                                                                                                                                          |

| SECTION 5 FIREFIGHTING MEASURES |                                                                                                                                                                |                                                                                                             |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 5.1.                            | Extinguishing media                                                                                                                                            |                                                                                                             |
|                                 | Suitable extinguishing media:                                                                                                                                  | Small fire - water spray, dry powder, CO <sub>2</sub><br>Large fire - water spray or alcohol-resistant foam |
|                                 | Unsuitable extinguishing media:                                                                                                                                | water jet                                                                                                   |
| 5.2.                            | Special hazards arising from the substance or mixture                                                                                                          |                                                                                                             |
|                                 | Hazardous combustion products:                                                                                                                                 | No information available                                                                                    |
| 5.3.                            | Advice for firefighters                                                                                                                                        |                                                                                                             |
|                                 | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing. Cool closed containers exposed to fire with water spray or vapor. |                                                                                                             |
| 5.4.                            | Additional information                                                                                                                                         |                                                                                                             |
|                                 | Remove sources of heat and ignition.<br>Do not contaminate the environment with extinguishing media.                                                           |                                                                                                             |

| SECTION 6 ACCIDENTAL RELEASE MEASURES |                                                                                                                                                         |                                                                                                                                                          |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1.                                  | Personal precautions, protective equipment and emergency procedures                                                                                     |                                                                                                                                                          |
| 6.1.1.                                | For non-emergency personnel                                                                                                                             |                                                                                                                                                          |
|                                       | Protective equipment:                                                                                                                                   | Use personal protective equipment (see Section 8).                                                                                                       |
|                                       | Accident prevention methods:                                                                                                                            | Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke. |
|                                       | Emergency procedures:                                                                                                                                   | Mark the area using proper signs.                                                                                                                        |
| 6.1.2.                                | For emergency responders:                                                                                                                               |                                                                                                                                                          |
|                                       | Wear protective equipment (see Section 8).                                                                                                              |                                                                                                                                                          |
| 6.2.                                  | Environmental precautions:                                                                                                                              |                                                                                                                                                          |
|                                       | Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112. |                                                                                                                                                          |
| 6.3.                                  | Methods and material for containment and cleaning up                                                                                                    |                                                                                                                                                          |
| 6.3.1.                                | Bundling, covering of drains; capping procedures:                                                                                                       | Sand or clay barriers.                                                                                                                                   |

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|--------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.3.2. | Cleaning up:                | Where possible, the substance can be absorbed by using inflammable material (sand, diatomaceous earth, vermiculite). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water. |
| 6.3.3. | Other information:          | -                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 6.4.   | Reference to other sections |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|        | -                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| SECTION 7 HANDLING AN STORAGE |                                                                                                  |                                                                                                                                                                             |
|-------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1.                          | Precautions for safe handling                                                                    |                                                                                                                                                                             |
| 7.1.1.                        | Protection measures                                                                              |                                                                                                                                                                             |
|                               | Measures to prevent fire:                                                                        | Keep away from sources of heat and ignition. Do not smoke.                                                                                                                  |
|                               | Measures to prevent aerosol and dust generation:                                                 | Secure proper ventilation.                                                                                                                                                  |
|                               | Measures to protect the environment:                                                             | Prevent spilling into the sewage system and waterways.                                                                                                                      |
|                               | Other measures:                                                                                  | -                                                                                                                                                                           |
| 7.1.2.                        | Advice on general occupational hygiene:                                                          |                                                                                                                                                                             |
|                               | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. |                                                                                                                                                                             |
| 7.2.                          | Conditions for safe storage, including any incompatibilities                                     |                                                                                                                                                                             |
|                               | Technical measures and storage conditions:                                                       | Keep in tightly closed and upright set containers in a well ventilated storage rooms, and away from sources of heat, sunlight, and other incompatible substances.           |
|                               | Packaging materials:                                                                             | Manufacturer's original packaging.                                                                                                                                          |
|                               | Requirements for storage rooms and vessels:                                                      | Keep away from food and drink. Keep the containers tightly closed.                                                                                                          |
|                               | Advices for storage equipment:                                                                   | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |
|                               | Further information on storage conditions:                                                       | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9). |
| 7.3.                          | Specific end use(s)                                                                              |                                                                                                                                                                             |
|                               | Recommendations:                                                                                 | -                                                                                                                                                                           |
|                               | Industrial sector specific solutions:                                                            | -                                                                                                                                                                           |

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| SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION                      |                    |                       |                                                      |                      |                         |
|----------------------------------------------------------------------|--------------------|-----------------------|------------------------------------------------------|----------------------|-------------------------|
| 8.1.                                                                 | Control parameters |                       |                                                      |                      |                         |
| Substance                                                            |                    | CAS No                | Occupational exposure limit values/short term values |                      | Biological limit values |
|                                                                      |                    |                       | ppm                                                  | mg/m <sup>3</sup>    |                         |
| Hydrogen chloride                                                    |                    | 7647-01-0             | 5/10                                                 | 8/15                 | -                       |
|                                                                      |                    |                       |                                                      |                      |                         |
| Substance name:                                                      | -                  |                       |                                                      |                      |                         |
| EC No:                                                               | -                  | CAS No:               | -                                                    |                      |                         |
| DNEL                                                                 |                    |                       |                                                      |                      |                         |
| Industrial                                                           |                    |                       |                                                      |                      |                         |
| Route of exposure:                                                   | Acute effect local | Acute effect systemic |                                                      | Chronic effect local | Chronic effect systemic |
| Oral                                                                 | -                  | -                     |                                                      | -                    | -                       |
| Inhalation                                                           | -                  | -                     |                                                      | -                    | -                       |
| Dermal                                                               | -                  | -                     |                                                      | -                    | -                       |
| Critical physical parameters: solubility, flammability, corrosivity: |                    |                       |                                                      | -                    |                         |
| Consumer                                                             |                    |                       |                                                      |                      |                         |
| Route of exposure:                                                   | Acute effect local | Acute effect systemic |                                                      | Chronic effect local | Chronic effect systemic |
| Oral                                                                 | -                  | -                     |                                                      | -                    | -                       |
| Inhalation                                                           | -                  | -                     |                                                      | -                    | -                       |
| Dermal                                                               | -                  | -                     |                                                      | -                    | -                       |
| PNEC                                                                 |                    |                       |                                                      |                      |                         |
| Environmental protection target                                      |                    |                       | PNEC                                                 |                      |                         |
| Fresh water                                                          |                    |                       | No information available                             |                      |                         |
| Freshwater sediments                                                 |                    |                       | No information available                             |                      |                         |
| Marine water                                                         |                    |                       | No information available                             |                      |                         |
| Marine sediments                                                     |                    |                       | No information available                             |                      |                         |
| Food chain                                                           |                    |                       | No information available                             |                      |                         |
| Microorganisms in sewage treatment                                   |                    |                       | No information available                             |                      |                         |
| Soil (agricultural)                                                  |                    |                       | No information available                             |                      |                         |
| Air                                                                  |                    |                       | No information available                             |                      |                         |
|                                                                      |                    |                       |                                                      |                      |                         |
| 8.2.                                                                 | Exposure controls  |                       |                                                      |                      |                         |

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|----------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 8.2.1.   | Engineering measures                                                           |                                                                                                                                                                                                      |  |
|          | Substance/mixture related measures to prevent exposure during identified uses: | Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.                                                                            |  |
|          | Structural measures to prevent exposure:                                       | No information available                                                                                                                                                                             |  |
|          | Organisational measures to prevent exposure:                                   | Organization of work in order to reduce other worker's influence during work process.                                                                                                                |  |
|          | Technical measures to prevent exposure:                                        | Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.                                                                                             |  |
| 8.2.2.   | Personal protection equipment                                                  |                                                                                                                                                                                                      |  |
| 8.2.2.1. | Eye and face protection:                                                       | Safety glasses that stick to face (preventing splashing) (EN 166) or visor.                                                                                                                          |  |
| 8.2.2.2. | Skin protection                                                                |                                                                                                                                                                                                      |  |
|          | Hand protection:                                                               | Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374.<br>Glove material: nitrile rubber<br>Glove thickness: ≥0.50 mm<br>Break through time: >480 min             |  |
|          | Other skin protection:                                                         | Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 13034), and shoes that cover the entire foot (EN 10335).                                                      |  |
| 8.2.2.3. | Respiratory protection:                                                        | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI. |  |
| 8.2.2.4. | Thermal hazards:                                                               | No information available                                                                                                                                                                             |  |
| 8.2.3.   | Environmental exposure controls                                                |                                                                                                                                                                                                      |  |
|          | Substance/mixture related measures to prevent exposure:                        | See Section 6                                                                                                                                                                                        |  |
|          | Structural measures to prevent exposure:                                       | Use modern equipment.                                                                                                                                                                                |  |
|          | Organisational measures to prevent exposure:                                   | Adapt the work process to the required working conditions of the workplace.                                                                                                                          |  |
|          | Technical measures to prevent exposure:                                        | See Section 6                                                                                                                                                                                        |  |

| SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES |                                                       |             |                          |
|--------------------------------------------|-------------------------------------------------------|-------------|--------------------------|
| 9.1.                                       | Information on basic physical and chemical properties |             |                          |
|                                            |                                                       | Value       | Method                   |
|                                            | Physical state:                                       | liquid      | No information available |
|                                            | Color:                                                | pale yellow | No information available |

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|                                                   |                          |                          |
|---------------------------------------------------|--------------------------|--------------------------|
| Odor:                                             | neutral                  | No information available |
| Odor threshold:                                   | No information available | No information available |
| pH:                                               | No information available | No information available |
| Melting point / freezing point:                   | No information available | No information available |
| Initial boiling point and boiling range:          | No information available | No information available |
| Flash point:                                      | No information available | No information available |
| Evaporation rate:                                 | No information available | No information available |
| Flammability (solid, gas):                        | No information available | No information available |
| Upper/lower flammability or explosive limits:     | No information available | No information available |
| Vapor pressure:                                   | No information available | No information available |
| Vapor density:                                    | No information available | No information available |
| Relative density:                                 | No information available | No information available |
| Bulk density:                                     | No information available | No information available |
| Solubility(ies):                                  | No information available | No information available |
| Partition coefficient: n-octanol/water (log Kow): | No information available | No information available |
| Auto-ignition temperature:                        | No information available | No information available |
| Decomposition temperature:                        | No information available | No information available |
| Viscosity:                                        | No information available | No information available |
| Explosive properties:                             | No information available | No information available |
| Oxidising properties:                             | No information available | No information available |
| 9.2.                                              | Other information        |                          |
|                                                   | -                        |                          |

| SECTION 10 STABILITY AND REACTIVITY |                                     |                                                                                          |
|-------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------|
| 10.1.                               | Reactivity:                         | See subsections 10.3 through 10.5.                                                       |
| 10.2.                               | Chemical stability:                 | The product is chemically stable under standard ambient conditions of storing and using. |
| 10.3.                               | Possibility of hazardous reactions: | With strong oxidants, sodium-hydroxide, sulfuric acid, aluminum.                         |
| 10.4.                               | Conditions to avoid:                | Sources of heat, sparks, and ignition.                                                   |
| 10.5.                               | Incompatible materials:             | Aluminum.                                                                                |
| 10.6.                               | Hazardous decomposition products:   | No information available.                                                                |

| SECTION 11 TOXICOLOGICAL INFORMATION |                                      |
|--------------------------------------|--------------------------------------|
| 11.1.                                | Information on toxicological effects |
|                                      | Acute toxicity:                      |

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| Route of exposure:   | Method                   | Species | Effective dose<br>LD <sub>50</sub> /LC <sub>50</sub> or<br>ATE <sub>mixture</sub> | Exposure time | Results |
|----------------------|--------------------------|---------|-----------------------------------------------------------------------------------|---------------|---------|
| Oral exposure:       | No information available | -       | LD <sub>50</sub>                                                                  | -             | -       |
| Dermal exposure:     | No information available | -       | LD <sub>50</sub>                                                                  | -             | -       |
| Inhalation exposure: | No information available | -       | LC <sub>50</sub>                                                                  | -             | -       |

**Specific target organ toxicity – single exposure (STOT SE):**

|                      | Specific effects         | Target organ             | Note |
|----------------------|--------------------------|--------------------------|------|
| Oral exposure:       | No information available | No information available | -    |
| Dermal exposure:     | No information available | No information available | -    |
| Inhalation exposure: | No information available | No information available | -    |

**Respiratory irritation:** No information available

**Irritation and corrosion**

|                  | Exposure time | Species | Evaluation | Method | Note |
|------------------|---------------|---------|------------|--------|------|
| Skin irritation: | -             | rabbit  | -          | -      | -    |
| Eye irritation:  | -             | rabbit  | -          | -      | -    |

**Sensitization**

|                      |                          |
|----------------------|--------------------------|
| Dermal exposure:     | No information available |
| Inhalation exposure: | No information available |

**Symptoms related to the physical, chemical and toxicological characteristics**

|                      |                                                                                                                                                                                                                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oral exposure:       | Swallowing may cause irritation of mucosa, tingling sensation in the mouth, burning sensation; higher levels of concentration may cause nausea, abdominal pain and vomiting. In case of vomiting, aspiration causes coughing, difficult breathing. Higher levels of concentration may cause suffocation. |
| Dermal exposure:     | Slight irritation. After short exposure, resorption effects are not likely. Long-term exposure may cause drying, cracking and tingling sensation of skin.                                                                                                                                                |
| Inhalation exposure: | Inhalation of large amounts of vapors in inadequately ventilated perimeter may cause coughing, sneezing, headache and nausea.                                                                                                                                                                            |
| Eye exposure:        | Direct eye contact may cause slight to moderate irritation, lacrimation and burning sensation.                                                                                                                                                                                                           |

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| Repeated dose toxicity (subacute, subchronic, chronic)        |                          |                          |                          |                          |                          |      |
|---------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
|                                                               | Dose                     | Exposure time            | Species                  | Method                   | Evaluation               | Note |
| Subacute oral                                                 | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute dermal                                               | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute inhalation                                           | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic oral                                               | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic dermal                                             | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic inhalation                                         | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic oral                                                  | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic dermal                                                | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic inhalation                                            | No information available | No information available | No information available | No information available | No information available | -    |
| Specific target organ toxicity – repeated exposure (STOT RE): |                          |                          |                          |                          |                          |      |
|                                                               | Specific effects         |                          | Target organ             |                          | Note                     |      |
| Subacute oral                                                 | No information available |                          | No information available |                          | -                        |      |
| Subacute dermal                                               | No information available |                          | No information available |                          | -                        |      |
| Subacute inhalation                                           | No information available |                          | No information available |                          | -                        |      |
| Subchronic oral                                               | No information available |                          | No information available |                          | -                        |      |
| Subchronic dermal                                             | No information available |                          | No information available |                          | -                        |      |
| Subchronic inhalation                                         | No information available |                          | No information available |                          | -                        |      |
| Chronic oral                                                  | No information available |                          | No information available |                          | -                        |      |

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| Chronic dermal     | No information available                                           | No information available                                                  | - |
| Chronic inhalation | No information available                                           | No information available                                                  | - |
|                    |                                                                    |                                                                           |   |
|                    | CMR effects (carcinogenicity, mutagenicity, reproductive toxicity) |                                                                           |   |
|                    | Carcinogenicity:                                                   | Current studies on test animals did not indicate carcinogenic effects.    |   |
|                    | Mutagenicity <i>in-vitro</i> :                                     | Current <i>in vitro</i> tests did not indicate mutagenic effects.         |   |
|                    | Genotoxicity:                                                      | No information available                                                  |   |
|                    | Mutagenicity <i>in-vivo</i> :                                      | Current <i>in vivo</i> tests did not indicate mutagenic effects.          |   |
|                    | Germ cell mutagenicity:                                            | No information available                                                  |   |
|                    | Reproductive toxicity:                                             | No toxicity on reproductive organs was determined in reproductive organs. |   |
|                    |                                                                    |                                                                           |   |
|                    | Summary of evaluation of the CMR properties:                       | -                                                                         |   |
|                    |                                                                    |                                                                           |   |
| 11.2.              | Practical experiences:                                             |                                                                           |   |
|                    | Remarks relevant for classification:                               | No information available                                                  |   |
|                    | Other remarks:                                                     | No information available                                                  |   |
|                    |                                                                    |                                                                           |   |
| 11.3.              | General notes:                                                     |                                                                           |   |
|                    | -                                                                  |                                                                           |   |

| SECTION 12 ECOLOGICAL INFORMATION: |                  |               |         |                          |            |      |
|------------------------------------|------------------|---------------|---------|--------------------------|------------|------|
| 12.1.                              | Toxicity         |               |         |                          |            |      |
| Acute toxicity                     | Dose             | Exposure time | Species | Method                   | Evaluation | Note |
| Fish                               | LC <sub>50</sub> | 96 hours      | -       | No information available | -          | -    |
| Crustacea:                         | EC <sub>50</sub> | 48 hours      | -       | No information available | -          | -    |
| Algae/aquatic plants               | IC <sub>50</sub> | 8 days        | -       | No information available | -          | -    |
| Microorganisms                     | LC <sub>50</sub> | 72 hours      | -       | -                        | -          | -    |
| Chronic toxicity                   | Dose             | Exposure time | Species | Method                   | Evaluation | Note |

|               |                                 |                |              |          |   |
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|                      |                  |          |                          |                          |                          |   |
|----------------------|------------------|----------|--------------------------|--------------------------|--------------------------|---|
| Fish                 | LC <sub>50</sub> | 96 hours | No information available | No information available | No information available | - |
| Crustacea:           | EC <sub>50</sub> | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC <sub>50</sub> | 72 hours | No information available | No information available | No information available | - |
| Other organisms      | -                | -        | -                        | -                        | -                        | - |

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| 12.2. | Persistence and degradability |
|-------|-------------------------------|

|  |                     |
|--|---------------------|
|  | Abiotic degradation |
|--|---------------------|

|              | Degradation half-lives   | Method                   | Evaluation               | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | -    |
| Fresh water  | No information available | No information available | No information available | -    |
| Air          | No information available | No information available | No information available | -    |
| Soil         | No information available | No information available | No information available | -    |

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|--|----------------|
|  | Biodegradation |
|--|----------------|

| % Degradation            | Time (days)              | Method                   | Evaluation               | Note                     |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
|                          |                          |                          |                          |                          |
|                          |                          |                          |                          |                          |

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| 12.3. | Bioaccumulative potential |
|-------|---------------------------|

|  |                                                   |
|--|---------------------------------------------------|
|  | Partition coefficient: n-octanol/water (log Kow): |
|--|---------------------------------------------------|

| Value | Concentration            | pH | °C | Method                   | Evaluation               | Note |
|-------|--------------------------|----|----|--------------------------|--------------------------|------|
| -     | No information available | -  | -  | No information available | No information available | -    |
|       |                          |    |    |                          |                          |      |
|       |                          |    |    |                          |                          |      |

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|--|-------------------------------|
|  | Bioconcentration factor (BCF) |
|--|-------------------------------|

| Value                    | Species                  | Method                   | Evaluation               | Note                     |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |

|               |                                 |                |              |          |   |
|---------------|---------------------------------|----------------|--------------|----------|---|
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|                                                  |                                                                |                          |                          |                          |                          |                          |      |
|--------------------------------------------------|----------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
|                                                  |                                                                |                          |                          |                          |                          |                          |      |
|                                                  |                                                                |                          |                          |                          |                          |                          |      |
|                                                  | Chronic ecotoxicity                                            |                          |                          |                          |                          |                          |      |
| Value                                            |                                                                | Dose                     | Exposure time            | Species                  | Method                   | Evaluation               | Note |
| Chronic toxicity on fish                         |                                                                | LC <sub>50</sub>         | No information available | No information available | No information available | No information available | -    |
| Chronic toxicity on crustacea ( <i>Daphnia</i> ) |                                                                | EC <sub>50</sub>         | No information available | No information available | No information available | No information available | -    |
|                                                  |                                                                |                          |                          |                          |                          |                          |      |
| 12.4.                                            | Mobility in soil                                               |                          |                          |                          |                          |                          |      |
|                                                  | Known or predicted distribution in environmental compartments: |                          |                          |                          |                          |                          |      |
|                                                  | No information available                                       |                          |                          |                          |                          |                          |      |
|                                                  | Surface tension:                                               |                          |                          |                          |                          |                          |      |
|                                                  | Value                                                          | °C                       | Concentration            | Method                   |                          | Note                     |      |
|                                                  | No information available                                       | No information available | No information available | No information available |                          | -                        |      |
|                                                  |                                                                |                          |                          |                          |                          |                          |      |
|                                                  |                                                                |                          |                          |                          |                          |                          |      |
|                                                  |                                                                |                          |                          |                          |                          |                          |      |
|                                                  | Adsorption / desorption                                        |                          |                          |                          |                          |                          |      |
| Transport                                        | A/D coefficient<br>Henry's constant                            |                          | log Kow                  | Evaporation rate         | Method                   | Note                     |      |
| Soil-water                                       | No information available                                       | No information available | No information available | No information available | No information available | -                        |      |
| Water-air                                        | No information available                                       | No information available | No information available | No information available | No information available | -                        |      |
| Soil-air                                         | No information available                                       | No information available | No information available | No information available | No information available | -                        |      |
|                                                  |                                                                |                          |                          |                          |                          |                          |      |
| 12.5.                                            | Results of PBT and vPvB assessment                             |                          |                          |                          |                          |                          |      |
|                                                  | No information available                                       |                          |                          |                          |                          |                          |      |
|                                                  |                                                                |                          |                          |                          |                          |                          |      |
| 12.6.                                            | Other adverse effects                                          |                          |                          |                          |                          |                          |      |
|                                                  | No information available                                       |                          |                          |                          |                          |                          |      |

|               |                                 |                |              |          |   |
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|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SECTION 13 DISPOSAL CONSIDERATIONS</b> |                                                                                                                                                                                                                                                                                                                                       |
| 13.1.                                     | Waste treatment methods                                                                                                                                                                                                                                                                                                               |
| 13.1.1.                                   | Product/Packaging disposal:                                                                                                                                                                                                                                                                                                           |
|                                           | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.                                                                                                                                                                                                                            |
| 13.1.2.                                   | Waste codes/waste designations according to Law:                                                                                                                                                                                                                                                                                      |
|                                           | No information available                                                                                                                                                                                                                                                                                                              |
| 13.1.3.                                   | Waste treatment – relevant information:                                                                                                                                                                                                                                                                                               |
|                                           | No information available                                                                                                                                                                                                                                                                                                              |
| 13.1.4.                                   | Sewage disposal – relevant information:                                                                                                                                                                                                                                                                                               |
|                                           | Waste must not be disposed of into the sewage system.                                                                                                                                                                                                                                                                                 |
| 13.1.5.                                   | Other disposal recommendations:                                                                                                                                                                                                                                                                                                       |
|                                           | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur. |
| 13.1.6.                                   | Relevant Community provisions:                                                                                                                                                                                                                                                                                                        |
|                                           | -                                                                                                                                                                                                                                                                                                                                     |
| <b>SECTION 14 TRANSPORT INFORMATION</b>   |                                                                                                                                                                                                                                                                                                                                       |
| Transporting/shipment by road (ADR)       |                                                                                                                                                                                                                                                                                                                                       |
| UN number:                                | Not subject to transport regulations.                                                                                                                                                                                                                                                                                                 |
| UN proper shipping name:                  | -                                                                                                                                                                                                                                                                                                                                     |
| Transport hazard class(es):               | -                                                                                                                                                                                                                                                                                                                                     |
| Packing group:                            | -                                                                                                                                                                                                                                                                                                                                     |
| Environmentally hazardous:                | -                                                                                                                                                                                                                                                                                                                                     |
| Special precautions for user:             | -                                                                                                                                                                                                                                                                                                                                     |
| Transporting/shipment by rail (RID)       |                                                                                                                                                                                                                                                                                                                                       |
| UN number:                                | Not subject to transport regulations.                                                                                                                                                                                                                                                                                                 |
| UN proper shipping name:                  | -                                                                                                                                                                                                                                                                                                                                     |
| Transport hazard class(es):               | -                                                                                                                                                                                                                                                                                                                                     |

|               |                                 |                |              |          |   |
|---------------|---------------------------------|----------------|--------------|----------|---|
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|-------------------------------|---|
| Packing group:                | - |
| Environmentally hazardous:    | - |
| Special precautions for user: | - |

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Inland waterway transport (ADN) |                                       |
| UN number:                      | Not subject to transport regulations. |
| UN proper shipping name:        | -                                     |
| Transport hazard class(es):     | -                                     |
| Packing group:                  | -                                     |
| Environmentally hazardous:      | -                                     |
| Special precautions for user:   | -                                     |

|                                     |                                       |
|-------------------------------------|---------------------------------------|
| Transporting/shipment by sea (IMDG) |                                       |
| UN number:                          | Not subject to transport regulations. |
| UN proper shipping name:            | -                                     |
| Transport hazard class(es):         | -                                     |
| Packing group:                      | -                                     |
| Environmentally hazardous:          | -                                     |
| Special precautions for user:       | -                                     |

|                                                 |                                       |
|-------------------------------------------------|---------------------------------------|
| Transporting/shipment by air (ICAO-TI/IATA-DGR) |                                       |
| UN number:                                      | Not subject to transport regulations. |
| UN proper shipping name:                        | -                                     |
| Transport hazard class(es):                     | -                                     |
| Packing group:                                  | -                                     |
| Environmentally hazardous:                      | -                                     |
| Special precautions for user:                   | -                                     |

|                      |                                               |
|----------------------|-----------------------------------------------|
| Further information: | The product is not subject to classification. |
|----------------------|-----------------------------------------------|

| SECTION 15 REGULATORY INFORMATION |                                                                                                |
|-----------------------------------|------------------------------------------------------------------------------------------------|
| 15.1.                             | Safety, health and environmental regulations/legislation specific for the substance or mixture |
|                                   | EU regulations                                                                                 |
|                                   | Authorization and/or restrictions of use                                                       |
|                                   | Authorizations: -                                                                              |
|                                   | Restrictions: -                                                                                |

|               |                                 |                |              |          |   |
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|                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other EU regulations:                                                                                        | <p>EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council;</p> <p>The European Commission Regulation No. 453/2006 of 2010 on changes and amendments to the Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH);</p> <p>EC Regulation No. 2037/2000 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer;</p> <p>EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals;</p> <p>EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants;</p> <p>Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives</p> |
| Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| National legislation:                                                                                        | <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 15.2.                                                                                                        | Chemical safety assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                              | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| SECTION 16 Other information                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                         |                             |                                                                                                                                                                                                                                                                                                   |   |   |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|
| 16.1.                                                                                                              | Indication of changes: -                                                                                                                                                                                                                                                                                                                                                                                                |                             |                                                                                                                                                                                                                                                                                                   |   |   |
| 16.2.                                                                                                              | <table> <tr> <td>Abbreviations and acronyms:</td><td> PBT                      Stable, bioaccumulative and toxic<br/> vPvB                    Strongly stable and strongly bioaccumulative.<br/> LD<sub>50</sub>                    Lethal dose, 50%<br/> LC<sub>50</sub>                    Lethal concentration, 50%<br/> STOT-SE                Specific target organ toxicity - single exposure </td></tr> </table> | Abbreviations and acronyms: | PBT                      Stable, bioaccumulative and toxic<br>vPvB                    Strongly stable and strongly bioaccumulative.<br>LD <sub>50</sub> Lethal dose, 50%<br>LC <sub>50</sub> Lethal concentration, 50%<br>STOT-SE                Specific target organ toxicity - single exposure |   |   |
| Abbreviations and acronyms:                                                                                        | PBT                      Stable, bioaccumulative and toxic<br>vPvB                    Strongly stable and strongly bioaccumulative.<br>LD <sub>50</sub> Lethal dose, 50%<br>LC <sub>50</sub> Lethal concentration, 50%<br>STOT-SE                Specific target organ toxicity - single exposure                                                                                                                       |                             |                                                                                                                                                                                                                                                                                                   |   |   |
| 16.3.                                                                                                              | Key literature references and source of data: -                                                                                                                                                                                                                                                                                                                                                                         |                             |                                                                                                                                                                                                                                                                                                   |   |   |
| 16.4.                                                                                                              | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)                                                                                                                                                                                                                                                                                                 |                             |                                                                                                                                                                                                                                                                                                   |   |   |
| <table> <tr> <td>Classification</td><td>Classification procedure</td></tr> <tr> <td>-</td><td>-</td></tr> </table> |                                                                                                                                                                                                                                                                                                                                                                                                                         | Classification              | Classification procedure                                                                                                                                                                                                                                                                          | - | - |
| Classification                                                                                                     | Classification procedure                                                                                                                                                                                                                                                                                                                                                                                                |                             |                                                                                                                                                                                                                                                                                                   |   |   |
| -                                                                                                                  | -                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |                                                                                                                                                                                                                                                                                                   |   |   |
| 16.5.                                                                                                              | Relevant H statements (number and full text)                                                                                                                                                                                                                                                                                                                                                                            |                             |                                                                                                                                                                                                                                                                                                   |   |   |

|               |                                 |                |              |          |   |
|---------------|---------------------------------|----------------|--------------|----------|---|
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|       |                      |                                                                                                                                                                                                                                                                                    |                                                                                                                            |
|-------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
|       | H:                   | H314<br>H315<br>H319<br>H331                                                                                                                                                                                                                                                       | Causes severe skin burns and eye damage.<br>Causes skin irritation.<br>Causes serious eye irritation.<br>Toxic if inhaled. |
| 16.6. | Training advice:     | -                                                                                                                                                                                                                                                                                  |                                                                                                                            |
| 16.7. | Further information: | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |                                                                                                                            |

|                                                                  |  |
|------------------------------------------------------------------|--|
| <b>ANNEX:</b>                                                    |  |
| <b>EXPOSURE SCENARIO RESULTING TO CHEMICAL SAFETY ASSESSMENT</b> |  |
| -                                                                |  |

|               |                                        |                      |             |            |
|---------------|----------------------------------------|----------------------|-------------|------------|
| Trading name: | <b>FUCHSIN ACID VAN GIESON REAGENT</b> |                      |             |            |
| Product code: | FAG-OT-X**                             | Date of compilation: | 03 Sep 2019 | Version: 4 |

| SECTION 1: Identification of the substance/mixture and of the company/undertaking |                                                                               |                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1                                                                               | Product identifier                                                            |                                                                                                                                                                                                                |
|                                                                                   | Trading name:                                                                 | FUCHSIN ACID VAN GIESON REAGENT                                                                                                                                                                                |
|                                                                                   | Chemical name:                                                                | -                                                                                                                                                                                                              |
|                                                                                   | Catalogue number:                                                             | FAG-OT-X**                                                                                                                                                                                                     |
| 1.2                                                                               | Relevant identified uses of the substance or mixture and uses advised against |                                                                                                                                                                                                                |
|                                                                                   | Uses:                                                                         | For use with special staining kits.                                                                                                                                                                            |
|                                                                                   | Uses advised against:                                                         | Only the identified uses are advised.                                                                                                                                                                          |
|                                                                                   | Reason why uses advised against:                                              | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes. |
| 1.3                                                                               | Details of the supplier of the safety data sheet                              |                                                                                                                                                                                                                |
|                                                                                   | Supplier:                                                                     | BioGnost Ltd.                                                                                                                                                                                                  |
|                                                                                   | Address:                                                                      | Medjugorska 59, Zagreb                                                                                                                                                                                         |
|                                                                                   | Telephone number:                                                             | +385 1 2409997                                                                                                                                                                                                 |
|                                                                                   | Telefax.:                                                                     | +385 1 2404039                                                                                                                                                                                                 |
|                                                                                   | e-mail of competent person:                                                   | <a href="mailto:msds@biognost.hr">msds@biognost.hr</a>                                                                                                                                                         |
|                                                                                   | National contact:                                                             | -                                                                                                                                                                                                              |
| 1.4                                                                               | Emergency telephone number                                                    |                                                                                                                                                                                                                |
|                                                                                   | National Protection and Rescue Directorate:                                   | 112                                                                                                                                                                                                            |
|                                                                                   | Medical information:                                                          | +385 1 2348 342                                                                                                                                                                                                |
|                                                                                   | Other information:                                                            | -                                                                                                                                                                                                              |

| SECTION 2. Hazards identification                                  |                                                                |                                 |
|--------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------|
| 2.1                                                                | Classification of the substance or mixture                     |                                 |
| 2.1.1                                                              | Classification according to Regulation (EC) No 1272/2008 (CLP) |                                 |
|                                                                    | Hazard class and category code:                                | Hazard statements*:             |
|                                                                    | Not identified as hazardous substance.                         | -                               |
| 2.1.2.                                                             | Additional information                                         |                                 |
|                                                                    | -                                                              |                                 |
| *For full text of Hazard- and EU Hazard-statements: see SECTION 16 |                                                                |                                 |
| 2.2                                                                | Label elements                                                 |                                 |
|                                                                    | Product identification:                                        | FUCHSIN ACID VAN GIESON REAGENT |
|                                                                    | Identification number:                                         | -                               |
|                                                                    | Authorization number:                                          | -                               |
|                                                                    | Hazard pictograms:                                             | -                               |

|               |                                        |                      |             |            |
|---------------|----------------------------------------|----------------------|-------------|------------|
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|     |                                       |   |
|-----|---------------------------------------|---|
|     | Signal word:                          | - |
|     | Hazard statements:                    | - |
|     | Precautionary statements:             | - |
|     | Supplemental hazard information (EU): | - |
| 2.3 | Other hazards                         |   |
|     | -                                     |   |

| SECTION 3. Composition/information on ingredients |                             |                                   |                                  |                                                                         |
|---------------------------------------------------|-----------------------------|-----------------------------------|----------------------------------|-------------------------------------------------------------------------|
| CAS/<br>EC/<br>Index number                       | REACH<br>Registration<br>No | Weight %<br>content (or<br>range) | Identification name              | Classification<br>according to<br>Regulation (EC) No<br>1272/2008 (CLP) |
| -                                                 | -                           | -                                 | Contains no hazardous substances | -                                                                       |

| SECTION 4. First aid measures |                                                             |                                                                                                                                                                                                                |
|-------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1                           | Description of first aid measures                           |                                                                                                                                                                                                                |
|                               | General notes:                                              | If the suggested first aid measures do not prove sufficient, seek medical attention.                                                                                                                           |
|                               | Following inhalation:                                       | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen.                            |
|                               | Following skin contact:                                     | Remove contaminated clothing. Immediately wash with plenty of water for at least 20 minutes. Seek medical assistance if the symptoms of irritation remain.                                                     |
|                               | Following eye contact:                                      | Rinse out with plenty of water with the eyelid held wide open for at least 20 minutes. If the symptoms remain, immediately call in ophthalmologist.                                                            |
|                               | Following ingestion:                                        | Rinse the mouth thoroughly with 1-2 glasses of water. Immediately consult a physician and show the container or label. In case of swallowing large quantities, transport the afflicted person to the hospital. |
|                               | Self-protection of the first aider:                         | -                                                                                                                                                                                                              |
| 4.2                           | Most important symptoms and effects, both acute and delayed |                                                                                                                                                                                                                |
|                               | Following inhalation:                                       | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.                                                                                     |
|                               | Following skin contact:                                     | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.                                                                                     |
|                               | Following eye contact:                                      | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.                                                                                     |
|                               | Following ingestion:                                        | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.                                                                                     |

|               |                                        |                      |             |          |   |
|---------------|----------------------------------------|----------------------|-------------|----------|---|
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|     |                                                                            |
|-----|----------------------------------------------------------------------------|
| 4.3 | Indication of any immediate medical attention and special treatment needed |
|     | -                                                                          |

| SECTION 5. Firefighting measures |                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.1                              | Extinguishing media                                                                                                                                             |
|                                  | Suitable extinguishing media: water spray, dry powder, CO <sub>2</sub> or alcohol resistant foam                                                                |
|                                  | Unsuitable extinguishing media: Water with full jet                                                                                                             |
| 5.2                              | Special hazards arising from the substance or mixture                                                                                                           |
|                                  | Hazardous combustion products: no information available                                                                                                         |
| 5.3                              | Advice for firefighters                                                                                                                                         |
|                                  | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing.                                                                    |
| 5.4                              | Additional information                                                                                                                                          |
|                                  | Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. Do not contaminate the environment with extinguishing media. |

| SECTION 6. Accidental release measures |                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1                                    | Personal precautions, protective equipment and emergency procedures                                                                                                                                                                                                                                                                                                                                                          |
| 6.1.1.                                 | For non-emergency personnel                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                        | Protective equipment: Use personal protective equipment (see Section 8).                                                                                                                                                                                                                                                                                                                                                     |
|                                        | Accident prevention methods: Evacuate members of all non-essential personnel and those members without protective equipment. Avoid breathing vapors and avoid contact with skin and eyes. Do not smoke. Keep away from ignition sources.                                                                                                                                                                                     |
|                                        | Emergency procedures: Mark the area using proper signs.                                                                                                                                                                                                                                                                                                                                                                      |
| 6.1.2.                                 | For emergency responders:                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                        | Use protective equipment; in case of inadequate ventilation use adequate airways protective equipment (see Section 8).                                                                                                                                                                                                                                                                                                       |
| 6.2                                    | Environmental precautions:                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                        | Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.                                                                                                                                                                                                                                                                      |
| 6.3                                    | Methods and material for containment and cleaning up                                                                                                                                                                                                                                                                                                                                                                         |
| 6.3.1.                                 | Bundling, covering of drains; capping procedures: Sand protective barrier or barriers made of similar materials.                                                                                                                                                                                                                                                                                                             |
| 6.3.2.                                 | Cleaning up: Where possible, the substance can be absorbed by using absorbing material. Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water. |

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|        |                                                                                                                                                                |                                                                                |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 6.3.3. | Other information:                                                                                                                                             | Secure proper ventilation. Do not use incompatible materials (see Section 10). |
| 6.4    | Reference to other sections                                                                                                                                    |                                                                                |
|        | See Section 7 for information on safe handling.<br>See Section 8 for information on personal protection equipment.<br>See Section 13 for disposal information. |                                                                                |

| SECTION 7. Handling and storage |                                                                                                  |                                                                                                                                                                              |
|---------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1                             | Precautions for safe handling                                                                    |                                                                                                                                                                              |
| 7.1.1.                          | Protection measures                                                                              |                                                                                                                                                                              |
|                                 | Measures to prevent fire:                                                                        | Use in well ventilated storage rooms. Keep away from sources of ignition and heat. Do not use tools that cause sparks. Do not smoke.                                         |
|                                 | Measures to prevent aerosol and dust generation:                                                 | Secure proper ventilation.                                                                                                                                                   |
|                                 | Measures to protect the environment:                                                             | Prevent spilling into the sewage system and waterways.                                                                                                                       |
|                                 | Other measures:                                                                                  | Protect against electrostatic charges.                                                                                                                                       |
| 7.1.2.                          | Advice on general occupational hygiene:                                                          |                                                                                                                                                                              |
|                                 | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. |                                                                                                                                                                              |
| 7.2                             | Conditions for safe storage, including any incompatibilities                                     |                                                                                                                                                                              |
|                                 | Technical measures and storage conditions:                                                       | Keep in tightly closed and upright set containers in a well ventilated storage rooms at temperatures ranging from 15 to 25 °C. Protect from heat and direct sunlight.        |
|                                 | Packaging materials:                                                                             | Manufacturer's original packaging.                                                                                                                                           |
|                                 | Requirements for storage rooms and vessels:                                                      | Keep away from food and drink. Keep the containers tightly closed.                                                                                                           |
|                                 | Advices for storage equipment:                                                                   | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.  |
|                                 | Further information on storage conditions:                                                       | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10). |
| 7.3                             | Specific end use(s)                                                                              |                                                                                                                                                                              |
|                                 | Recommendations:                                                                                 | -                                                                                                                                                                            |
|                                 | Industrial sector specific solutions:                                                            | -                                                                                                                                                                            |

|                                                         |
|---------------------------------------------------------|
| <b>SECTION 8. Exposure controls/personal protection</b> |
|---------------------------------------------------------|

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|----------------------------------------------------------------------|--|--------------------|--------|-----------------------|------------------------------------------------------|----------------------|-------------------------|--|-------------------------|--|
| 8.1                                                                  |  |                    |        |                       | Control parameters                                   |                      |                         |  |                         |  |
| Substance                                                            |  |                    | CAS No |                       | Occupational exposure limit values/short term values |                      | Biological limit values |  |                         |  |
|                                                                      |  |                    |        |                       | ppm                                                  | mg/m <sup>3</sup>    |                         |  |                         |  |
| -                                                                    |  |                    | -      |                       | -                                                    |                      | -                       |  | -                       |  |
|                                                                      |  |                    |        |                       |                                                      |                      |                         |  |                         |  |
| Substance name:                                                      |  | -                  |        |                       |                                                      |                      |                         |  |                         |  |
| EC No:                                                               |  | -                  |        | CAS No:               |                                                      | -                    |                         |  |                         |  |
| DNEL                                                                 |  |                    |        |                       |                                                      |                      |                         |  |                         |  |
| Industrial                                                           |  |                    |        |                       |                                                      |                      |                         |  |                         |  |
| Route of exposure:                                                   |  | Acute effect local |        | Acute effect systemic |                                                      | Chronic effect local |                         |  | Chronic effect systemic |  |
| Oral                                                                 |  | -                  |        | -                     |                                                      | -                    |                         |  | -                       |  |
| Inhalation                                                           |  | -                  |        | -                     |                                                      | -                    |                         |  | -                       |  |
| Dermal                                                               |  | -                  |        | -                     |                                                      | -                    |                         |  | -                       |  |
| Critical physical parameters: solubility, flammability, corrosivity: |  |                    |        |                       |                                                      | -                    |                         |  |                         |  |
| Consumer                                                             |  |                    |        |                       |                                                      |                      |                         |  |                         |  |
| Route of exposure:                                                   |  | Acute effect local |        | Acute effect systemic |                                                      | Chronic effect local |                         |  | Chronic effect systemic |  |
| Oral                                                                 |  | -                  |        | -                     |                                                      | -                    |                         |  | -                       |  |
| Inhalation                                                           |  | -                  |        | -                     |                                                      | -                    |                         |  | -                       |  |
| Dermal                                                               |  | -                  |        | -                     |                                                      | -                    |                         |  | -                       |  |
| PNEC                                                                 |  |                    |        |                       |                                                      |                      |                         |  |                         |  |
| Environmental protection target                                      |  |                    |        |                       | PNEC                                                 |                      |                         |  |                         |  |
| Fresh water                                                          |  |                    |        |                       | no information available                             |                      |                         |  |                         |  |
| Freshwater sediments                                                 |  |                    |        |                       | no information available                             |                      |                         |  |                         |  |
| Marine water                                                         |  |                    |        |                       | no information available                             |                      |                         |  |                         |  |
| Marine sediments                                                     |  |                    |        |                       | no information available                             |                      |                         |  |                         |  |
| Food chain                                                           |  |                    |        |                       | no information available                             |                      |                         |  |                         |  |
| Microorganisms in sewage treatment                                   |  |                    |        |                       | no information available                             |                      |                         |  |                         |  |
| Soil (agricultural)                                                  |  |                    |        |                       | no information available                             |                      |                         |  |                         |  |
| Air                                                                  |  |                    |        |                       | no information available                             |                      |                         |  |                         |  |
|                                                                      |  |                    |        |                       |                                                      |                      |                         |  |                         |  |
| 8.2                                                                  |  |                    |        |                       | Exposure controls                                    |                      |                         |  |                         |  |
| 8.2.1.                                                               |  |                    |        |                       | Appropriate engineering controls                     |                      |                         |  |                         |  |

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|          |                                                                                |                                                                                                                                                                                                                                                                                                                                 |
|----------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | Substance/mixture related measures to prevent exposure during identified uses: | Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.                                                                                                                                                                                                       |
|          | Structural measures to prevent exposure:                                       | In accordance with Section 7.                                                                                                                                                                                                                                                                                                   |
|          | Organisational measures to prevent exposure:                                   | Organization of work in order to reduce other worker's influence during work process.                                                                                                                                                                                                                                           |
|          | Technical measures to prevent exposure:                                        | Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels. Secure stations for rinsing eyes and showering.                                                                                                                                                                        |
| 8.2.2.   | <b>Personal protection equipment</b>                                           |                                                                                                                                                                                                                                                                                                                                 |
| 8.2.2.1. | Eye and face protection:                                                       | Safety glasses that stick to face (EN 166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air.                                                                                                                          |
| 8.2.2.2. | <b>Skin protection</b>                                                         |                                                                                                                                                                                                                                                                                                                                 |
|          | Hand protection:                                                               | The protective gloves have to satisfy the specification of Regulation (EU) 2016/425 and the related standard EN 374.<br>Glove material: nitrile rubber<br>Glove thickness: 0.40 mm<br>Time until perforation: > 480 min                                                                                                         |
|          | Other skin protection:                                                         | During everyday work use cotton clothing (EN 340) and suitable footwear, such as rubber boots (EN 20345) or shoes that cover the entire foot. In case of spilling hazard, use clothing made of impermeable material suitable for protection from liquid chemicals (Viton, PVC, himex) and footwear made from the same material. |
| 8.2.2.3. | Respiratory protection:                                                        | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI.                                                                                                                            |
| 8.2.2.4. | Thermal hazards:                                                               | No information available                                                                                                                                                                                                                                                                                                        |
| 8.2.3.   | <b>Environmental exposure controls</b>                                         |                                                                                                                                                                                                                                                                                                                                 |
|          | Substance/mixture related measures to prevent exposure:                        | See Section 6                                                                                                                                                                                                                                                                                                                   |
|          | Structural measures to prevent exposure:                                       | Use modern equipment.                                                                                                                                                                                                                                                                                                           |
|          | Organisational measures to prevent exposure:                                   | Adapt the work process to the required working conditions of the workplace.                                                                                                                                                                                                                                                     |
|          | Technical measures to prevent exposure:                                        | See Section 6                                                                                                                                                                                                                                                                                                                   |

|                                                    |                                                       |
|----------------------------------------------------|-------------------------------------------------------|
| <b>SECTION 9. Physical and chemical properties</b> |                                                       |
| 9.1                                                | Information on basic physical and chemical properties |

|               |                                        |                      |             |          |   |
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|     |                                                   | Value                    | Method                   |
|-----|---------------------------------------------------|--------------------------|--------------------------|
|     | Physical state:                                   | liquid                   | No information available |
|     | Colour:                                           | red                      | No information available |
|     | Odour:                                            | No information available | No information available |
|     | Odor threshold:                                   | No information available | No information available |
|     | pH:                                               | No information available | No information available |
|     | Melting point / freezing point:                   | No information available | No information available |
|     | Initial boiling point and boiling range:          | No information available | No information available |
|     | Flash point:                                      | No information available | No information available |
|     | Evaporation rate:                                 | No information available | No information available |
|     | Flammability (solid, gas):                        | No information available | No information available |
|     | Upper/lower flammability or explosive limits:     | No information available | No information available |
|     | Vapour pressure:                                  | No information available | No information available |
|     | Vapour density:                                   | No information available | No information available |
|     | Relative density:                                 | No information available | No information available |
|     | Bulk density:                                     | No information available | No information available |
|     | Solubility(ies):                                  | No information available | No information available |
|     | Partition coefficient: n-octanol/water (log Kow): | No information available | No information available |
|     | Auto-ignition temperature:                        | No information available | No information available |
|     | Decomposition temperature:                        | No information available | No information available |
|     | Viscosity:                                        | No information available | No information available |
|     | Explosive properties:                             | No information available | No information available |
|     | Oxidising properties:                             | No information available | No information available |
| 9.2 | Other information                                 |                          |                          |
|     | -                                                 |                          |                          |

| SECTION 10. Stability and reactivity |                                     |                                                                                                             |
|--------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 10.1                                 | Reactivity:                         | See subsections 10.3 through 10.5.                                                                          |
| 10.2                                 | Chemical stability:                 | The product is chemically stable under standard ambient conditions of storing and using (room temperature). |
| 10.3                                 | Possibility of hazardous reactions: | No information available                                                                                    |
| 10.4                                 | Conditions to avoid:                | No information available                                                                                    |
| 10.5                                 | Incompatible materials:             | No information available                                                                                    |
| 10.6                                 | Hazardous decomposition products:   | No information available                                                                                    |

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| SECTION 11. Toxicological information |                                                                              |                                                              |                                                               |               |         |
|---------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------|---------------|---------|
| 11.1                                  | Information on toxicological effects                                         |                                                              |                                                               |               |         |
|                                       | Acute toxicity:                                                              |                                                              |                                                               |               |         |
| Route of exposure:                    | Method                                                                       | Species                                                      | Dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mix</sub> | Exposure time | Results |
| Oral:                                 | No information available                                                     | -                                                            | No information available                                      | -             | -       |
| Dermal:                               | No information available                                                     | -                                                            | No information available                                      | -             | -       |
| Inhalation:                           | No information available                                                     | -                                                            | No information available                                      | -             | -       |
|                                       |                                                                              |                                                              |                                                               |               |         |
|                                       | Specific target organ toxicity – single exposure (STOT SE):                  |                                                              |                                                               |               |         |
|                                       | Specific effects                                                             |                                                              | Target organ                                                  |               | Note    |
| Oral:                                 | No information available                                                     |                                                              | No information available                                      |               | -       |
| Dermal:                               | No information available                                                     |                                                              | No information available                                      |               | -       |
| Inhalation:                           | No information available                                                     |                                                              | No information available                                      |               | -       |
|                                       |                                                                              |                                                              |                                                               |               |         |
|                                       | Aspiration hazard:                                                           |                                                              | No information available.                                     |               |         |
|                                       |                                                                              |                                                              |                                                               |               |         |
|                                       | Irritation and corrosion                                                     |                                                              |                                                               |               |         |
|                                       | Exposure time                                                                | Species                                                      | Evaluation                                                    | Method        | Note    |
| Skin corrosion/irritation:            | -                                                                            | -                                                            | -                                                             | -             | -       |
| Serious eye damage/irritation         | -                                                                            | -                                                            | -                                                             | -             | -       |
|                                       |                                                                              |                                                              |                                                               |               |         |
|                                       | Sensitization                                                                |                                                              |                                                               |               |         |
| Skin sensitization:                   |                                                                              | No information available.                                    |                                                               |               |         |
| Respiratory sensitization:            |                                                                              | No information available.                                    |                                                               |               |         |
|                                       |                                                                              |                                                              |                                                               |               |         |
|                                       | Symptoms related to the physical, chemical and toxicological characteristics |                                                              |                                                               |               |         |
| Oral exposure:                        |                                                                              | Harmful if swallowed.                                        |                                                               |               |         |
| Dermal exposure:                      |                                                                              | Harmful if absorbed through skin. May cause skin irritation. |                                                               |               |         |
| Inhalation exposure:                  |                                                                              | Harmful if inhaled. May cause respiratory tract irritation.  |                                                               |               |         |
| Eye exposure:                         |                                                                              | May cause eye irritation.                                    |                                                               |               |         |
|                                       |                                                                              |                                                              |                                                               |               |         |

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| Repeated dose toxicity (subacute, subchronic, chronic)        |                          |                          |                          |                          |                          |      |
|---------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
|                                                               | Dose                     | Exposure time            | Species                  | Method                   | Evaluation               | Note |
| Subacute oral                                                 | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute dermal                                               | No information available | No information available | No information available | No information available | No information available | -    |
| Subacute inhalation                                           | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic oral                                               | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic dermal                                             | No information available | No information available | No information available | No information available | No information available | -    |
| Subchronic inhalation                                         | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic oral                                                  | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic dermal                                                | No information available | No information available | No information available | No information available | No information available | -    |
| Chronic inhalation                                            | No information available | No information available | No information available | No information available | No information available | -    |
| Specific target organ toxicity – repeated exposure (STOT RE): |                          |                          |                          |                          |                          |      |
|                                                               | Specific effects         |                          | Target organ             |                          | Note                     |      |
| Subacute oral                                                 | No information available |                          | No information available |                          | -                        |      |
| Subacute dermal                                               | No information available |                          | No information available |                          | -                        |      |
| Subacute inhalation                                           | No information available |                          | No information available |                          | -                        |      |
| Subchronic oral                                               | No information available |                          | No information available |                          | -                        |      |
| Subchronic dermal                                             | No information available |                          | No information available |                          | -                        |      |
| Subchronic inhalation                                         | No information available |                          | No information available |                          | -                        |      |
| Chronic oral                                                  | No information available |                          | No information available |                          | -                        |      |
| Chronic dermal                                                | No information available |                          | No information available |                          | -                        |      |

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|                    |                                                                    |                                                                   |   |
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| Chronic inhalation | No information available                                           | No information available                                          | - |
|                    |                                                                    |                                                                   |   |
|                    | CMR effects (carcinogenicity; mutagenicity; reproductive toxicity) |                                                                   |   |
|                    | Carcinogenicity:                                                   | Based on available data, the classification criteria are not met. |   |
|                    | Mutagenicity <i>in vitro</i> :                                     | Based on available data, the classification criteria are not met. |   |
|                    | Genotoxicity:                                                      | Based on available data, the classification criteria are not met. |   |
|                    | Mutagenicity <i>in vivo</i> :                                      | Based on available data, the classification criteria are not met. |   |
|                    | Germ cell mutagenicity:                                            | Based on available data, the classification criteria are not met. |   |
|                    | Reproductive toxicity:                                             | Based on available data, the classification criteria are not met. |   |
|                    |                                                                    |                                                                   |   |
|                    | Summary of evaluation of the CMR properties:                       | Based on available data, the classification criteria are not met. |   |
|                    |                                                                    |                                                                   |   |
| 11.2               | Practical experiences:                                             |                                                                   |   |
|                    | Classification observations:                                       | No information available                                          |   |
|                    | Other observations:                                                | No information available                                          |   |
|                    |                                                                    |                                                                   |   |
| 11.3               | General notes:                                                     |                                                                   |   |
|                    | -                                                                  |                                                                   |   |

| SECTION 12. Ecological information |                  |               |                          |                          |                          |      |
|------------------------------------|------------------|---------------|--------------------------|--------------------------|--------------------------|------|
| 12.1                               | Toxicity         |               |                          |                          |                          |      |
| Acute (short-term) toxicity        | Dose             | Exposure time | Species                  | Method                   | Evaluation               | Note |
| Fish                               | LC <sub>50</sub> | 96 hours      | No information available | No information available | No information available | -    |
| Crustacea:                         | EC <sub>50</sub> | 48 hours      | No information available | No information available | No information available | -    |
| Algae/aquatic plants               | IC <sub>50</sub> | 4 days        | No information available | No information available | No information available | -    |
| Other organisms                    | -                | -             | -                        | -                        | -                        | -    |
| Chronic (long-term) toxicity       | Dose             | Exposure time | Species                  | Method                   | Evaluation               | Note |
| Fish                               | LC <sub>50</sub> | 96 hours      | No information available | No information available | No information available | -    |

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|----------------------|------------------|----------|--------------------------|--------------------------|--------------------------|---|
| Crustacea:           | EC <sub>50</sub> | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC <sub>50</sub> | 72 hours | No information available | No information available | No information available | - |
| Other organisms      | -                | -        | -                        | -                        | -                        | - |

## 12.2 Persistence and degradability

### Abiotic degradation

|              | Degradation half-lives   | Method                   | Evaluation               | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | -    |
| Fresh water  | No information available | No information available | No information available | -    |
| Air          | No information available | No information available | No information available | -    |
| Soil         | No information available | No information available | No information available | -    |

### Biodegradation

| % Degradation            | Time (days)              | Method                   | Evaluation               | Note                     |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
|                          |                          |                          |                          |                          |
|                          |                          |                          |                          |                          |

## 12.3 Bioaccumulative potential

### Octanol-water partition coefficient (log Kow)

| Value | Concentration | pH | °C | Method | Evaluation | Note |
|-------|---------------|----|----|--------|------------|------|
| -     | -             | -  | -  | -      | -          | -    |
|       |               |    |    |        |            |      |
|       |               |    |    |        |            |      |

### Bioconcentration factor (BCF)

| Value                    | Species                  | Method                   | Evaluation               | Note |
|--------------------------|--------------------------|--------------------------|--------------------------|------|
| No information available | No information available | No information available | No information available | -    |
|                          |                          |                          |                          |      |

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|                                                  |                                                                |                          |                          |                          |                          |      |
|--------------------------------------------------|----------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
|                                                  |                                                                |                          |                          |                          |                          |      |
|                                                  |                                                                |                          |                          |                          |                          |      |
| Chronic ecotoxicity                              |                                                                |                          |                          |                          |                          |      |
| Value                                            | Dose                                                           | Exposure time            | Species                  | Method                   | Evaluation               | Note |
| Chronic toxicity on fish                         | LC <sub>50</sub>                                               | No information available | No information available | No information available | No information available | -    |
| Chronic toxicity on crustacea ( <i>Daphnia</i> ) | EC <sub>50</sub>                                               | No information available | No information available | No information available | No information available | -    |
|                                                  |                                                                |                          |                          |                          |                          |      |
| 12.4                                             | Mobility in soil                                               |                          |                          |                          |                          |      |
|                                                  | Known or predicted distribution in environmental compartments: |                          |                          |                          |                          |      |
|                                                  | No information available                                       |                          |                          |                          |                          |      |
|                                                  | Surface tension:                                               |                          |                          |                          |                          |      |
|                                                  | Value                                                          | °C                       | Concentration            | Method                   | Note                     |      |
|                                                  | No information available                                       | No information available | No information available | No information available | -                        |      |
|                                                  |                                                                |                          |                          |                          |                          |      |
|                                                  |                                                                |                          |                          |                          |                          |      |
|                                                  |                                                                |                          |                          |                          |                          |      |
|                                                  | Adsorption / desorption                                        |                          |                          |                          |                          |      |
| Transport                                        | A/D coefficient<br>Henry's constant                            |                          | log Kow                  | Evaporation rate         | Method                   | Note |
| Soil-water                                       | No information available                                       | No information available | No information available | No information available | No information available | -    |
| Water-air                                        | No information available                                       | No information available | No information available | No information available | No information available | -    |
| Soil-air                                         | No information available                                       | No information available | No information available | No information available | No information available | -    |
|                                                  |                                                                |                          |                          |                          |                          |      |
| 12.5                                             | Results of PBT and vPvB assessment                             |                          |                          |                          |                          |      |
|                                                  | Not applicable.                                                |                          |                          |                          |                          |      |
|                                                  |                                                                |                          |                          |                          |                          |      |
| 12.6                                             | Other adverse effects                                          |                          |                          |                          |                          |      |
|                                                  | No further relevant information available.                     |                          |                          |                          |                          |      |
|                                                  |                                                                |                          |                          |                          |                          |      |

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|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SECTION 13. Disposal considerations</b> |                                                                                                                                                                                                                                                                                 |
| 13.1                                       | Waste treatment methods                                                                                                                                                                                                                                                         |
| 13.1.1.                                    | Product/Packaging disposal:                                                                                                                                                                                                                                                     |
|                                            | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.                                                                                                                                                                      |
| 13.1.2.                                    | Waste codes/waste designations according to Law:                                                                                                                                                                                                                                |
|                                            | 15 01 10*: Packaging that contains residual hazardous substances or is contaminated with hazardous substances                                                                                                                                                                   |
| 13.1.3.                                    | Waste treatment – relevant information:                                                                                                                                                                                                                                         |
|                                            | No information available                                                                                                                                                                                                                                                        |
| 13.1.4.                                    | Sewage disposal – relevant information:                                                                                                                                                                                                                                         |
|                                            | Waste must not be disposed of into the sewage system.                                                                                                                                                                                                                           |
| 13.1.5.                                    | Other disposal recommendations:                                                                                                                                                                                                                                                 |
|                                            | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. |
| 13.1.6.                                    | Relevant Community provisions:                                                                                                                                                                                                                                                  |
|                                            | Disposal must be made according to official regulations.                                                                                                                                                                                                                        |
| <b>SECTION 14 TRANSPORT INFORMATION</b>    |                                                                                                                                                                                                                                                                                 |
|                                            | Transporting/shipment by road (ADR)                                                                                                                                                                                                                                             |
| UN number:                                 | Not subject to transport regulations                                                                                                                                                                                                                                            |
| UN proper shipping name:                   | -                                                                                                                                                                                                                                                                               |
| Transport hazard class(es):                | -                                                                                                                                                                                                                                                                               |
| Packing group:                             | -                                                                                                                                                                                                                                                                               |
| Environmentally hazardous:                 | -                                                                                                                                                                                                                                                                               |
| Special precautions for user:              | -                                                                                                                                                                                                                                                                               |
|                                            | Transporting/shipment by rail (RID)                                                                                                                                                                                                                                             |
| UN number:                                 | Not subject to transport regulations                                                                                                                                                                                                                                            |
| UN proper shipping name:                   | -                                                                                                                                                                                                                                                                               |
| Transport hazard class(es):                | -                                                                                                                                                                                                                                                                               |
| Packing group:                             | -                                                                                                                                                                                                                                                                               |

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|                                                                           |                                      |
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| Environmentally hazardous:                                                | -                                    |
| Special precautions for user:                                             | -                                    |
| Inland waterway transport (ADN)                                           |                                      |
| UN number:                                                                | Not subject to transport regulations |
| UN proper shipping name:                                                  | -                                    |
| Transport hazard class(es):                                               | -                                    |
| Packing group:                                                            | -                                    |
| Environmentally hazardous:                                                | -                                    |
| Special precautions for user:                                             | -                                    |
| Transporting/shipment by sea (IMDG)                                       |                                      |
| UN number:                                                                | Not subject to transport regulations |
| UN proper shipping name:                                                  | -                                    |
| Transport hazard class(es):                                               | -                                    |
| Packing group:                                                            | -                                    |
| Environmentally hazardous:                                                | -                                    |
| Special precautions for user:                                             | -                                    |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: | -                                    |
| Transporting/shipment by air (ICAO-TI/IATA-DGR)                           |                                      |
| UN number:                                                                | Not subject to transport regulations |
| UN proper shipping name:                                                  | -                                    |
| Transport hazard class(es):                                               | -                                    |
| Packing group:                                                            | -                                    |
| Environmentally hazardous:                                                | -                                    |
| Special precautions for user:                                             | -                                    |
| Further information:                                                      |                                      |
| -                                                                         |                                      |

| <b>SECTION 15. Regulatory information</b> |                                                                                                |
|-------------------------------------------|------------------------------------------------------------------------------------------------|
| 15.1                                      | Safety, health and environmental regulations/legislation specific for the substance or mixture |
|                                           | EU regulations                                                                                 |
|                                           | Authorization and/or restrictions of use                                                       |
|                                           | Authorizations:                                                                                |
|                                           | -                                                                                              |
|                                           | Restrictions:                                                                                  |
|                                           | -                                                                                              |

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|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other EU regulations:                                                                                        | <p>EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council;</p> <p>Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH);</p> <p>EC Regulation No. 2037/2000 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer;</p> <p>EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals;</p> <p>EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants;</p> <p>Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives</p> |
| Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| National legislation:                                                                                        | <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 15.2                                                                                                         | Chemical safety assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                              | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| SECTION 16. Other information |                                                                                                                         |   |                          |                                                  |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------|---|--------------------------|--------------------------------------------------|
| 16.1                          | Indication of changes:                                                                                                  |   | -                        |                                                  |
| 16.2                          | Abbreviations and acronyms:                                                                                             |   | PBT                      | Stable, bioaccumulative and toxic                |
|                               |                                                                                                                         |   | vPvB                     | Strongly stable and strongly bioaccumulative.    |
|                               |                                                                                                                         |   | LD <sub>50</sub>         | Lethal dose, 50%                                 |
|                               |                                                                                                                         |   | LC <sub>50</sub>         | Lethal concentration, 50%                        |
|                               |                                                                                                                         |   | TCOJ                     | Specific target organ toxicity - single exposure |
| 16.3.                         | Key literature references and source of data:                                                                           |   | -                        |                                                  |
| 16.4.                         | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) |   |                          |                                                  |
| Classification                |                                                                                                                         |   | Classification procedure |                                                  |
| -                             |                                                                                                                         |   | -                        |                                                  |
| 16.5.                         | Relevant H statements (number and full text)                                                                            |   |                          |                                                  |
|                               | H:                                                                                                                      | - | -                        |                                                  |
| 16.6.                         | Training advice:                                                                                                        |   | -                        |                                                  |

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| 16.7. | Further information: | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |
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| <b>ANNEX: Exposure scenario resulting to chemical safety assessment</b> |
| -                                                                       |