

Trading name:	<b>SAFRANINE O, C.I. 50240</b>		
Product code:	SO-P-X**	Revision date:	06.08.2019. Version: 3


**SECTION 1. Identification of the substance/mixture and of the company/undertaking**

<b>1.1. Product identifier</b>	
Substance name:	SAFRANINE O, C.I. 50240
EC No:	205-194-2
Synonyms:	Safranin, Basic Red 2, Safranin T, Phenazinium
Catalogue number:	SO-P-X**
REACH registration number:	-
CAS No:	477-73-6
Index no.:	-
<b>1.2. Relevant identified uses of the substance or mixture and uses advised against</b>	
Uses:	For microscopy.
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.
<b>1.3. Details of the supplier of the safety data sheet</b>	
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:	-
<b>1.4. Emergency telephone number</b>	
National Protection and Rescue Directorate:	112
Medical information:	+385 1 2348 342
Other information:	-

**SECTION 2. Hazards information**

<b>2.1. Classification of the substance or mixture</b>	
<b>2.1.1. Classification according to Regulation (EC) No 1272/2008 (CLP)</b>	
Hazard class and category code:	Hazard statements*:
Eye Dam. 1	H318
<b>2.1.2. Additional information</b>	
-	
*For full text of Hazard- and EU Hazard-statements: see Section 16	
<b>2.2. Label elements</b>	
Product identification:	SAFRANINE O, C.I. 50240

Trading name:	<b>SAFRANINE O, C.I. 50240</b>		
Product code:	SO-P-X**	Revision date:	06.08.2019. Version: 3

Identification number:	-
Authorization no.:	-
Hazard pictograms:	 GHS05
Signal word:	Danger
Hazard statements:	H318 Causes serious eye damage
Precautionary statements:	P281 Wear personal protective gear P301+P312 IF SWALLOWED: Call a POISON CENTER or a doctor if you feel unwell 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):	-
<b>2.3. Other hazards</b>	
-	

<b>SECTION 3. Composition/information on ingredients</b>				
CAS No	EC No:	Index no.	Identification name	Weight % content (or range)
477-73-6	205-194-2	-	3,7-Diamino-2,8-dimethyl-5-phenylphenazinium chloride	95

<b>SECTION 4. First aid measures</b>		
<b>4.1. Description of first aid measures</b>		
General notes:	If the suggested first aid measures do not prove sufficient, seek medical attention.	
Following inhalation:	Move to fresh air. Consult a physician.	
Following skin contact:	Rinse with plenty of soap & water and seek medical advice.	
Following eye contact:	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.	
Following ingestion:	Do not induce vomiting without medical advice. Rinse with water. Consult physician.	
Self-protection of the first aider:	-	
<b>4.2. Most important symptoms and effects, both acute and delayed</b>		
Following inhalation:	May cause respiratory system irritation.	
Following skin contact:	May cause skin irritation. May be absorbed through the skin in	

Trading name:	<b>SAFRANINE O, C.I. 50240</b>		
Product code:	SO-P-X**	Revision date:	06.08.2019. Version: 3

		harmful amounts.
	Following eye contact:	May cause serious eye damage.
	Following ingestion:	May cause serious irritation of the digestive tract.
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:	Water, carbon dioxide, alcohol-resistant foam, dry powder.
	Unsuitable extinguishing media:	No information available
5.2.	Special hazards arising from the substance or mixture	
	Hazardous combustion products:	No information available
5.3.	Advice for firefighters	
	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH approved or equivalent, and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.	
5.4.	Additional information	
	Remove sources of heat and ignition. 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:	Avoid inhaling dust. Avoid contact with the substance. Secure proper ventilation.
	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 or waterways.	
6.3.	Methods and material for containment and cleaning up	
6.3.1.	For creating barriers, covering and sealing:	Cap the drains. Collect, bundle and pump out everything that got spilled. Pay attention to the possible material restrictions (see Sections 7 and 10). Collect in dry form.
6.3.2.	Cleaning up:	Vacuum or sweep, then store in a tightly closed container. Prevent formation of dust. Ventilate the room
6.3.3.	Other information:	-

Trading name:	<b>SAFRANINE O, C.I. 50240</b>		
Product code:	SO-P-X**	Revision date:	06.08.2019. Version: 3

6.4.	Reference to other sections
	For indications of waste processing see Section 13.

**SECTION 7. Handling and storage**

7.1. Precautions for safe handling

7.1.1. Protection measures

Measures to prevent fire:	-
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.
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7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:	Minimize dust formation. Avoid inhaling vapor, dust, mist or gas. Avoid contact with skin, eyes and clothes. Keep in tightly closed container. Avoid swallowing and breathing.
Packaging materials:	Manufacturer's original packaging.
Requirements for storage rooms and vessels:	Keep container tightly closed. Keep in cool, dry and well-ventilated space, away from incompatible substances.
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:	No information available.

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>	
-	-	-	-	-

Substance	-
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Trading name:	<b>SAFRANINE O, C.I. 50240</b>				
Product code:	SO-P-X**	Revision date:	06.08.2019.	Version:	3

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**

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:	Use with appropriate ventilation.

**8.2.2. Personal protection equipment**

8.2.2.1. Eye and face protection:	Safety glasses that stick to face (preventing splashing) or visor.
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Trading name:	<b>SAFRANINE O, C.I. 50240</b>		
Product code:	SO-P-X**	Revision date:	06.08.2019. Version: 3

8.2.2.2.	Skin protection	
	Hand protection:	Nitrile rubber protective gloves, 0.11 mm thick
	Other skin protection:	Cotton clothing and adequate closed footwear.
8.2.2.3.	Respiratory protection:	Suitable mask or half mask equipped with "A" filter used when concentration levels exceed GVI.
8.2.2.4.	Thermal hazards:	-
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:	Solid	No information available
	Color:	Red-brown-green	No information available
	Odor:	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
	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):	50 g/L (20°C)	No information available
	Partition coefficient: n-	No information available	No information available

Trading name:	<b>SAFRANINE O, C.I. 50240</b>				
Product code:	SO-P-X**	Revision date:	06.08.2019.	Version:	3

octanol/water (log Kow):			
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		
	-		

<b>SECTION 10. Stability and reactivity</b>	
10.1.	Reactivity: No information available.
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: Oxidizing agents.
10.4.	Conditions to avoid: Strong heating (decomposition).
10.5.	Incompatible materials: No information available.
10.6.	Hazardous decomposition products: See Section 5.

<b>SECTION 11. Toxicological information</b>					
11.1. Information on toxicological effects					
Acute toxicity:					
Route of exposure:	Method	Species	Dose LD <sub>50</sub> /LC <sub>50</sub>	Exposure time	Results
Oral exposure:	No information available	No information available	No information available	No information available	-
Dermal exposure:	No information available	No information available	No information available	No information available	-
Inhalation exposure:	No information available	No information available	No information available	No information available	-
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	-	

Trading name:	<b>SAFRANINE O, C.I. 50240</b>				
Product code:	SO-P-X**	Revision date:	06.08.2019.	Version:	3

Inhalation exposure:	No information available		available	No information available	-	
Aspiration hazard:		No information available				
Irritation and corrosion						
	Exposure time	Species	Evaluation	Method	Note	
Skin corrosion/irritation:	No information available	No information available	-	No information available	No information available	
Serious eye damage/irritation	No information available	No information available	-	No information available	No information available	
Sensitization						
Dermal exposure:	No information available					
Inhalation exposure:	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	-



Trading name:	<b>SAFRANINE O, C.I. 50240</b>				
Product code:	SO-P-X**	Revision date:	06.08.2019.	Version:	3

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	-
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: No information available

11.2. Practical experiences:

Trading name:	<b>SAFRANINE O, C.I. 50240</b>				
Product code:	SO-P-X**	Revision date:	06.08.2019.	Version:	3

Remarks relevant for classification:	No information available
Other remarks:	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>	72 hours	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	-	

Trading name:	<b>SAFRANINE O, C.I. 50240</b>				
Product code:	SO-P-X**	Revision date:	06.08.2019.	Version:	3

Biodegradation				
% Degradation	Time (days)	Method	Evaluation	Note
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	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

**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

Trading name:	<b>SAFRANINE O, C.I. 50240</b>				
Product code:	SO-P-X**	Revision date:	06.08.2019.	Version:	3

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

Adsorption / desorption

Transport	A/D coefficient 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
	No information available
12.6.	Other adverse effects
	No information available

<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:

Trading name:	<b>SAFRANINE O, C.I. 50240</b>		
Product code:	SO-P-X**	Revision date:	06.08.2019. Version: 3

	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:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazard(s):	-
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:	-
Environmental hazard(s):	-
Special precautions for user:	-
Transporting/shipment by inland waterways (ADN)	
UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmental hazard(s):	-
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:	-
Environmental hazard(s):	-
Special precautions for user:	-
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:	-

Trading name:	<b>SAFRANINE O, C.I. 50240</b>		
Product code:	SO-P-X**	Revision date:	06.08.2019. Version: 3

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:	-
Environmental hazard(s):	-
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: EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council; 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); EC Regulation No. 2037/2000 of the European Parliament and Council from 29 June 2000 on substances that damage the ozone layer; EC Regulation No. 689/2008 of the European Parliament and Council from 17 June 2008 concerning the export and import of dangerous chemicals; EC Regulation No. 850/2004 of the European Parliament and Council from 29 April 2004 about persistent organic pollutants; 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**

Trading name:	<b>SAFRANINE O, C.I. 50240</b>		
Product code:	SO-P-X**	Revision date:	06.08.2019. Version: 3

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% STOT-SE Specific target organ toxicity - single exposure
16.3.	Key literature references and source of data:	-
16.4.	Relevant H statements (number and full text)	
	H: 318	Causes serious eye damage.
16.5.	Training advice:	-
16.6.	Further information:	** "X" in the product code marks different volumes (different packaging of the product) 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.

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