

Trading name:	SILVER NITRATE, 1% SOLUTION				
Product code:	SN1-OT-X**	Date of compilation:	12 July 2019	Version:	2

SECTION 1: Identification of the substance/mixture and of the company/undertaking	
1.1	Product identifier
	Trading name: SILVER NITRATE, 1% SOLUTION
	Chemical name: -
	Catalogue number: SN1-OT-X**
1.2	Relevant identified uses of the substance or mixture and uses advised against
	Uses: For use with Grimelius 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: msds@biognost.hr
	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: Aquatic Chronic 3
	Hazard statements*: H412
2.1.2.	Additional information
	-
*For full text of Hazard- and EU Hazard-statements: see SECTION 16	
2.2	Label elements
	Product identification: SILVER NITRATE, 1% SOLUTION
	Identification number: -
	Authorization number: -
	Hazard pictograms: -
	Signal word: -

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Hazard statements:	H412 Harmful to aquatic life with long lasting effects.
Precautionary statements:	P273 Avoid release to the environment P501 Dispose of contents/container in accordance with local regulations.
Supplemental hazard information (EU):	-
2.3	Other hazards
	-

SECTION 3. Composition/information on ingredients

CAS/ EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
7761-88-8/ 231-853-9/ 047-001-00-2	-	< 1 %	silver nitrate	Ox. Sol. 2; H272 Skin Corr. 1B; H314 Aquatic Acute 1; H400 Aquatic Chronic 1; H410

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 oral cavity, drink 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.	

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	Following eye contact:	Depending on concentration and exposure time, it may lead to irritation, tearing, redness and pain.
	Following ingestion:	Danger of gastric perforation.
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, foam, dry powder, CO ₂ or alcohol resistant foam.
	Unsuitable extinguishing media:	Water with full jet.
5.2	Special hazards arising from the substance or mixture	
	Hazardous combustion products:	Nitrogen oxides (NO _x). During heating or in case of fire poisonous gases are produced.
5.3	Advice for firefighters	
	Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing.	
5.4	Additional information	
	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.
	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 or clay barriers.

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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:	Do not use incompatible materials (see Section 10).
6.4	Reference to other sections	
	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. 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.
	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 at temperatures ranging from +2 to +8 °C.
	Packaging materials:	Manufacturer's original packaging. Avoid metal containers.
	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:	-

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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 ³	
Silver (as Ag)	-	-	0.01	-

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

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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:	Protective nitrile gloves, >0.11 mm thick (EN 374).
	Other skin protection:	Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 340) and shoes that cover the entire foot.
8.2.2.3.	Respiratory protection:	Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present.
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:	No information available	No information available

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	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 dangerous reactions known.
10.4	Conditions to avoid:	No information available
10.5	Incompatible materials:	No information available
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	Dose LD ₅₀ /LC ₅₀ or ATE _{mix}	Exposure time	Results
Oral:	-	-	-	-	-
Dermal:	-	-	-	-	-
Inhalation:	-	-	-	-	-

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:	-
Respiratory sensitization:	-

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	-				

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

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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:	
Classification observations:	-
Other observations:	-
11.3 General notes:	
-	

SECTION 12. Ecological information						
12.1 Toxicity						
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	Leuciscus idus (Golden orfe)	-	-	0.011 mg/l (silver nitrate)
Crustacea:	EC ₅₀	48 hours	<i>Daphnia magna</i> (Water flea)	-	-	0.0082 mg/l (silver nitrate)
Algae/aquatic plants	IC ₅₀	4 days	Pseudokirchneriella subcapitata (green algae)	-	-	0.19 mg/l (silver nitrate)
Other organisms	-	-	-	-	-	-
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC ₅₀	72 hours	No information available	No information available	No information available	-

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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	-

Biodegradation

% Degradation	Time (days)	Method	Evaluation	Note
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	-

Chronic ecotoxicity

Value	Dose	Exposure time	Species	Method	Evaluation	Note

Trading name:	SILVER NITRATE, 1% SOLUTION				
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Chronic toxicity on fish	LC ₅₀	No information available	No information available	No information available	No information available	-
Chronic toxicity on crustacea (<i>Daphnia</i>)	EC ₅₀	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 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					
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12.6 Other adverse effects

No information available					
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SECTION 13. Disposal considerations

13.1 Waste treatment methods

13.1.1. Product/Packaging disposal:

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	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:
	-

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:	-
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:	-
Environmentally hazardous:	-
Special precautions for user:	-
	Inland waterway transport (ADN)
UN number:	Not subject to transport regulations
UN proper shipping name:	-

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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:	-

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 border="0"> <tr> <td>Abbreviations and acronyms:</td> <td>PBT</td> <td>Stable, bioaccumulative and toxic</td> </tr> <tr> <td></td> <td>vPvB</td> <td>Strongly stable and strongly bioaccumulative.</td> </tr> <tr> <td></td> <td>LD₅₀</td> <td>Lethal dose, 50%</td> </tr> <tr> <td></td> <td>LC₅₀</td> <td>Lethal concentration, 50%</td> </tr> <tr> <td></td> <td>TCOJ</td> <td>Specific target organ toxicity - single exposure</td> </tr> </table>	Abbreviations and acronyms:	PBT	Stable, bioaccumulative and toxic		vPvB	Strongly stable and strongly bioaccumulative.		LD ₅₀	Lethal dose, 50%		LC ₅₀	Lethal concentration, 50%		TCOJ	Specific target organ toxicity - single exposure
Abbreviations and acronyms:	PBT	Stable, bioaccumulative and toxic														
	vPvB	Strongly stable and strongly bioaccumulative.														
	LD ₅₀	Lethal dose, 50%														
	LC ₅₀	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)															
	<table border="0"> <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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	H272	May intensify fire; oxidiser.
	H314	Causes severe skin burns and eye damage.
H:	H400	Very toxic to aquatic life.
	H410	Very toxic to aquatic life with long lasting effects.
	H412	Harmful to aquatic life with long lasting effects
16.6.	Training advice:	-
16.7.	Further information:	** "X" in the product code marks different volumes (different packagings 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.

ANNEX: Exposure scenario resulting to chemical safety assessment	
-	

Trading name:	ACETATE BUFFER, GRIMELIUS				
Product code:	APG-OT-X**	Date of compilation:	12 July 2019	Version:	2

SECTION 1: Identification of the substance/mixture and of the company/undertaking	
1.1	Product identifier
	Trading name: ACETATE BUFFER, GRIMELIUS
	Chemical name: -
	Catalogue number: APG-OT-X**
1.2	Relevant identified uses of the substance or mixture and uses advised against
	Uses: For use with Grimelius 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: msds@biognost.hr
	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)				
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">Hazard class and category code:</td> <td style="width: 50%; padding: 5px;">Hazard statements*:</td> </tr> <tr> <td style="padding: 5px;">Not identified as hazardous substance.</td> <td style="padding: 5px;">-</td> </tr> </table>	Hazard class and category code:	Hazard statements*:	Not identified as hazardous substance.	-
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: ACETATE BUFFER, GRIMELIUS				
	Identification number: -				
	Authorization number: -				
	Hazard pictograms: -				

Trading name:	ACETATE BUFFER, GRIMELIUS				
Product code:	APG-OT-X**	Date of compilation:	12 July 2019	Version:	2

Signal word:	-
Hazard statements:	-
Precautionary statements:	-
Supplemental hazard information (EU):	-

2.3	Other hazards
	-

SECTION 3. Composition/information on ingredients

CAS/EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 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.

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	Following ingestion:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
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 ₂ 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.

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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. See Section 8 for information on personal protection equipment. 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).

Trading name:	ACETATE BUFFER, GRIMELIUS				
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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 ³	
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

Trading name:	ACETATE BUFFER, GRIMELIUS				
Product code:	APG-OT-X**	Date of compilation:	12 July 2019	Version:	2

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. Glove material: nitrile rubber Glove thickness: 0.40 mm 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.

Trading name:	ACETATE BUFFER, GRIMELIUS				
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Technical measures to prevent exposure:	See Section 6
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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:		No information available	No information available
Odor threshold:		No information available	No information available
pH:		5.5 – 5.7	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.
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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 ₅₀ /LC ₅₀ or ATE _{mix}	Exposure time	Results
Oral:	-	-	No information available	-	-
Dermal:	-	-	No information available	-	-
Inhalation:	-	-	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.				

Trading name:	ACETATE BUFFER, GRIMELIUS				
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Symptoms related to the physical, chemical and toxicological characteristics						
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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.

Repeated dose toxicity (subacute, subchronic, chronic)						
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	Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No information available	-				
Subacute dermal	No information available	-				
Subacute inhalation	No information available	-				
Subchronic oral	No information available	-				
Subchronic dermal	No information available	-				
Subchronic inhalation	No information available	-				
Chronic oral	No information available	-				
Chronic dermal	No information available	-				
Chronic inhalation	No information available	-				

Specific target organ toxicity – repeated exposure (STOT RE):						
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	Specific effects	Target organ	Note
Subacute oral	No information available	No information available	-
Subacute dermal	No information available	No information available	-

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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:
	-

SECTION 12. Ecological information

12.1	Toxicity					
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-

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Algae/aquatic plants	IC ₅₀	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 ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC ₅₀	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				

12.3 Bioaccumulative potential

Octanol-water partition coefficient (log K_{ow})

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

Trading name:	ACETATE BUFFER, GRIMELIUS				
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	Bioconcentration factor (BCF)				
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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 ₅₀	No information available	No information available	No information available	No information available	-
Chronic toxicity on crustacea (<i>Daphnia</i>)	EC ₅₀	No information available	No information available	No information available	No information available	-

--	--	--	--	--	--

12.4	Mobility in soil
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	Known or predicted distribution in environmental compartments:				
--	--	--	--	--	--

	No information available				
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	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 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					
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:					
Disposal must be made according to official regulations.					
SECTION 14 TRANSPORT INFORMATION					
Transporting/shipment by road (ADR)					
UN number:		Not subject to transport regulations			
UN proper shipping name:		-			

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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:	-
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:	-

Trading name:	ACETATE BUFFER, GRIMELIUS				
Product code:	APG-OT-X**	Date of compilation:	12 July 2019	Version:	2

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: -
	Other EU regulations: EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council; Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH); EC Regulation No. 2037/200 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, 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: <table border="0"> <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>LD₅₀</td> <td>Lethal dose, 50%</td> </tr> <tr> <td>LC₅₀</td> <td>Lethal concentration, 50%</td> </tr> <tr> <td>TCOJ</td> <td>Specific target organ toxicity - single exposure</td> </tr> </table>	PBT	Stable, bioaccumulative and toxic	vPvB	Strongly stable and strongly bioaccumulative.	LD ₅₀	Lethal dose, 50%	LC ₅₀	Lethal concentration, 50%	TCOJ	Specific target organ toxicity - single exposure
PBT	Stable, bioaccumulative and toxic										
vPvB	Strongly stable and strongly bioaccumulative.										
LD ₅₀	Lethal dose, 50%										
LC ₅₀	Lethal concentration, 50%										
TCOJ	Specific target organ toxicity - single exposure										
16.3.	Key literature references and source of data: -										

Trading name:	ACETATE BUFFER, GRIMELIUS			
Product code:	APG-OT-X**	Date of compilation:	12 July 2019	Version: 2

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:		-
16.7.	Further information:		** "X" in the product code marks different volumes (different packagings 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.

ANNEX: Exposure scenario resulting to chemical safety assessment	
-	

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking	
1.1.	Product identifier
	Trade name: HYDROQUINONE – SODIUM SULPHITE
	Chemical name: -
	Catalogue number: HNS-15-X**
1.2.	Relevant identified uses of the substance or mixture and uses advised against
	Uses: For use with Grimlius 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 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: msds@biognost.hr
	National contact: -
1.4.	Emergency telephone numbers
	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)														
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: left; padding: 5px;">Hazard class and category code:</th> <th style="text-align: left; padding: 5px;">Hazard statement*:</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Acute Tox. 4</td> <td style="padding: 5px;">H302</td> </tr> <tr> <td style="padding: 5px;">Skin Sens. 1</td> <td style="padding: 5px;">H317</td> </tr> <tr> <td style="padding: 5px;">Eye Dam. 1</td> <td style="padding: 5px;">H318</td> </tr> <tr> <td style="padding: 5px;">Muta. 2</td> <td style="padding: 5px;">H341</td> </tr> <tr> <td style="padding: 5px;">Carc. 2</td> <td style="padding: 5px;">H351</td> </tr> <tr> <td style="padding: 5px;">Aquatic Acute 1</td> <td style="padding: 5px;">H400</td> </tr> </tbody> </table>	Hazard class and category code:	Hazard statement*:	Acute Tox. 4	H302	Skin Sens. 1	H317	Eye Dam. 1	H318	Muta. 2	H341	Carc. 2	H351	Aquatic Acute 1	H400
Hazard class and category code:	Hazard statement*:														
Acute Tox. 4	H302														
Skin Sens. 1	H317														
Eye Dam. 1	H318														
Muta. 2	H341														
Carc. 2	H351														
Aquatic Acute 1	H400														
2.1.2.	Additional information														
	-														
* For full text of Hazard- and EU Hazard-statements: see SECTION 16															
2.2.	Label elements														
	Product identification: HYDROQUINONE – SODIUM SULPHITE														

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

Identification number:	-
Authorisation number:	-
Hazard pictograms:	   
Signal word:	Danger
Hazard statements:	<p>H302 Harmful if swallowed.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H318 Causes serious eye damage.</p> <p>H341 Suspected of causing genetic defects.</p> <p>H351 Suspected of causing cancer.</p> <p>H400 Very toxic to aquatic life.</p>
Precautionary statements:	<p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p>
Supplemental hazard information (EU):	-
2.3. Other hazards	-

SECTION 3. Composition/information on ingredients				
CAS/ EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

123-31-9/ 204-617-8/ 604-005-00-4	-	30 %	hydroquinone	Acute Tox. 4; H302 Skin Sens. 1; H317 Eye Dam. 1; H318 Muta. 2; H341 Carc. 2; H351 Aquatic Acute 1; H400
7757-83-7/ 231-821-4/ -	-	70 %	sodium sulphite, anhydrous	not classified

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:	Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.
	Following skin contact:	Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.
	Following eye contact:	Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
	Following ingestion:	Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
	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).
	Following skin contact:	May cause allergic reactions.
	Following eye contact:	Splatter may cause discomfort, stinging sensation, conjunctival redness.
	Following ingestion:	No information available.
4.3.	Indication of any immediate medical attention and special treatment needed	
	No information available	

SECTION 5. Firefighting measures		
5.1.	Extinguishing media	
	Suitable extinguishing media:	Small fire - water spray, dry powder, alcohol-resistant foam, CO ₂ Large fire - water spray or alcohol-resistant foam
	Unsuitable extinguishing media:	None in particular.
5.2.	Special hazards arising from the substance or mixture	

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

	Hazardous byproducts of fire:	Incomplete combustion of the product.
5.3.	Advice for firefighters	
	Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.	
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 materials 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
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	
	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.	

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

SECTION 7. Handling and storage			
7.1.	Precautions for safe handling		
7.1.1.	Protective 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 ³	
Hydroquinone	123-31-9	-	0,5	No information available
Substance:	-			
EC No:	-	CAS No:	-	
DNEL				
Industrial				

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

Route of exposure:	Acute effect local	Acute effect systemic	Chronic effect local	Chronic effect systemic
Oral	-	-	-	-
Inhalation	-	-	-	-
Dermal	-	-	-	-

Key physical parameters: solubility flammability, corrosion: -

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:	Do not eat, drink or smoke in the workspace. Use personal protective equipment.
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 (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.
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Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

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. Glove material: nitrile rubber Glove thickness: 0.40 mm 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:	The use of respiratory tract protection equipment, such as masks like that indicated above, is necessary to reduce worker exposure in the absence of technical measures. The protection provided by masks is in any case limited. If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138). An emergency eye washing and shower system must be provided.
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
	Colour:	White	No information available
	Odour:	Odourless	No information available

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

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:	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):	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. Sensitivity to light.
10.3.	Possibility of hazardous reactions:	No hazardous reactions are foreseeable in normal conditions of use and storage.
10.4.	Conditions to avoid:	None in particular. However the usual precautions used for chemical products should be respected.
10.5.	Incompatible materials:	Information not available.
10.6.	Hazardous decomposition products:	Information not available.

Trade name:	HYDROQUINONE - SODIUM SULPHITE				
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version:	2

SECTION 11. Toxicological information					
11.1. Information on toxicological effects					
Acute toxicity:					
Route of exposure:	Method	Species	Effective Dose LD ₅₀ /LC ₅₀ or ATE _{mixture}	Exposure time	Results
Oral:	OECD Test 401	rat	367,3 mg/kg (hydroquinone)	No information available	-
Dermal:	OECD Test 402	rabbit	> 2000 mg/kg (hydroquinone)	No information available	-
Inhalation:	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:	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	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					
Skin sensitization:	May cause sensitisation by skin contact.				
Respiratory sensitization:	No information available				
Symptoms related to the physical, chemical and toxicological characteristics					
Oral exposure:	Nausea, Vomiting, Diarrhoea				
Dermal exposure:	May cause allergic reactions.				

Trade name:	HYDROQUINONE - SODIUM SULPHITE				
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Inhalation exposure:	Mucosal irritations, lung oedema. Symptoms may be delayed.
Eye exposure:	No information available

Repeated dose toxicity (subacute, subchronic, chronic)						
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	Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No information available	-				
Subacute dermal	No information available	-				
Subacute inhalation	No information available	-				
Subchronic oral	No information available	-				
Subchronic dermal	No information available	-				
Subchronic inhalation	No information available	-				
Chronic oral	No information available	-				
Chronic dermal	No information available	-				
Chronic inhalation	No information available	-				

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

Trade name:	HYDROQUINONE - SODIUM SULPHITE				
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version:	2

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:	Limited evidence of carcinogenicity in animal studies. IARC:3-Group 3: Not classifiable as to its carcinogenicity to humans (hydroquinone)
Mutagenicity <i>in-vitro</i> :	No information available
Genotoxicity:	No information available
Mutagenicity <i>in-vivo</i> :	In vitro tests showed mutagenic effects (hydroquinone)
Germ cell mutagenicity :	Laboratory experiments have shown mutagenic effects (hydroquinone)
Reproductive toxicity:	No information available
Summary of evaluation of the CMR properties; :	
	No information available

11.2.	Practical experiences:
	Classification observations:
	Other observations:
11.3.	General notes:
	-

SECTION 12. Ecological information

12.1.	Toxicity					
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish:	LC ₅₀	96 hours	Pimephales promelas (fathead minnow)	No information available	0,044 mg/l (hydroquinone)	-
Crustacea:	EC ₅₀	48 hours	Daphnia magna (Water flea)	No information available	0,29 mg/l (hydroquinone)	-

Trade name:	HYDROQUINONE - SODIUM SULPHITE				
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version:	2

Algae/aquatic plants:	EC ₅₀	72 hours	Pseudokirchneriella subcapitata	No information available	0,335 mg/l (hydroquinone)	-
Other organisms:	-	-	-	-	-	-
Chronic (long-term) toxicity	Doza	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants:	IC ₅₀	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
86% (hydroquinone)	14 d	OECD Test Guideline 301C	-	readily biodegradable

12.3. Bioaccumulative potential

Octanol-water partition coefficient (log K_{ow})

Value	Concentration	pH	°C	Method	Evaluation	Note
0.59	-	-	-	experimental	-	bioaccumulation is not expected

Trade name:	HYDROQUINONE - SODIUM SULPHITE				
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version:	2

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

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

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

12.5.	Results of PBT and vPvB assessment
	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6.	Other adverse effects
	Very toxic to aquatic life with long lasting effects.
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 Low:
	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:
	-
SECTION 14. Transport information	
	Transporting/shipment by road (ADR)
UN number:	3077
UN proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
Transport hazard class(es):	9
Packing group:	III

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

Environmental hazards:	Yes
Special precautions for user:	-
Transporting/shipment by rail (RID)	
UN number:	3077
UN proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
Transport hazard class(es):	9
Packing group:	III
Environmental hazards:	Yes
Special precautions for user:	-
Transporting/shipment by inland waterways (ADN)	
UN number:	3077
UN proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
Transport hazard class(es):	9
Packing group:	III
Environmental hazards:	Yes
Special precautions for user:	-
Transporting/shipment by sea (IMDG)	
UN number:	3077
UN proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
Transport hazard class(es):	9
Packing group:	III
Environmental hazards:	Yes
Special precautions for user:	-
Transport in bulk according to Annex II of MARPOL73/78 and the IBC code:	-
Transporting/shipment by air (ICAO-TI/IATA-DGR)	
UN number:	3077
UN proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
Transport hazard class(es):	9
Packing group:	III
Environmental hazards:	Yes
Special precautions for user:	-
Further information:	Packages smaller than or equal to 5 kg or L, not dangerous goods of class 9.

SECTION 15. Regulatory information

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	EU regulations	
	Authorisation and/or restrictions on use	
	Authorisations:	-
	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>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 of 29 June 2000 on ozone-depleting substances;</p> <p>EC Regulation No. 689/2008 of the European Parliament and Council of 17 June 2008 concerning the export and import of dangerous chemicals;</p> <p>EC Regulation No. 850/2004 of the European Parliament and Council of 29 April 2004 on 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:	<p>PBT Stable, bioaccumulative and toxic</p> <p>vPvB Strongly stable and strongly bioaccumulative</p> <p>LD₅₀ Lethal dose, 50%</p> <p>LC₅₀ Lethal concentration, 50%</p> <p>STOT - SE Specific target organ toxicity - single exposure</p>
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)	

Trade name:	HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	12 July 2019	Version: 2

Classification	Classification procedure
-	-
16.5. Relevant H statements (number and full text)	
H: H302 H317 H318 H341 H351 H400 H410	Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing genetic defects. Suspected of causing cancer. Harmful if swallowed. Very toxic to aquatic life.
16.6. Training advice:	-
16.7. Further information:	** "X" in the product code marks different volumes (different packagings 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.

ANNEX: Exposure scenario resulting to Chemical safety assessment
-

Trading name:	SODIUM THIOSULFATE, 5% SOLUTION				
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

SECTION 1: Identification of the substance/mixture and of the company/undertaking	
1.1	Product identifier
	Trading name: SODIUM THIOSULFATE, 5% SOLUTION
	Chemical name: -
	Catalogue number: NT5-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: msds@biognost.hr
	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: SODIUM THIOSULFATE, 5% SOLUTION
	Identification number: -
	Authorization number: -
	Hazard pictograms: -

Trading name:	SODIUM THIOSULFATE, 5% SOLUTION				
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

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

SECTION 3. Composition/information on ingredients				
CAS/EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
7772-98-7/ 231-867-5/ -	-	< 5 %	sodium thiosulphate	not classified

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.

Trading name:	SODIUM THIOSULFATE, 5% SOLUTION				
Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

	Following ingestion:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
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 ₂ 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.

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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. See Section 8 for information on personal protection equipment. 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 ³	
-	-	-	-	-

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

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Product code:	NT5-OT-X**	Date of compilation:	05 July 2019	Version:	3

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. Glove material: nitrile rubber Glove thickness: 0.40 mm 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
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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:		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.
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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 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

SECTION 11. Toxicological information					
11.1 Information on toxicological effects					
Acute toxicity:					
Route of exposure:	Method	Species	Dose LD ₅₀ /LC ₅₀ or ATE _{mix}	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.				

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Symptoms related to the physical, chemical and toxicological characteristics

Oral exposure:	Swallowing may cause discomfort in abdomen and abdominal pains.
Dermal exposure:	Allergic persons may display irritation.
Inhalation exposure:	Allergic persons may display irritation after prolonged or repeated exposure.
Eye exposure:	May cause eye irritation.

Repeated dose toxicity (subacute, subchronic, chronic)

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

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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:
	-

SECTION 12. Ecological information

12.1	Toxicity					
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-

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Algae/aquatic plants	IC ₅₀	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 ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC ₅₀	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				

12.3 Bioaccumulative potential

Octanol-water partition coefficient (log K_{ow})

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

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

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

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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 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	-
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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:

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.

SECTION 14 TRANSPORT INFORMATION

Transporting/shipment by road (ADR)

UN number: Not subject to transport regulations

UN proper shipping name: -

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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:	-
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:	-

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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: -
	Other EU regulations: EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council; 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, 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 ₅₀ Lethal dose, 50% LC ₅₀ Lethal concentration, 50% TCOJ Specific target organ toxicity - single exposure
16.3.	Key literature references and source of data: -

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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:		-
16.7.	Further information:		** "X" in the product code marks different volumes (different packagings 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.

ANNEX: Exposure scenario resulting to chemical safety assessment	
-	

Trading name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
Product code:	KR-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:	NUCLEAR FAST RED (KERNECHTROT) REAGENT
	Chemical name:	-
	Catalogue number:	KR-OT-X**
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Uses:	Counterstain in many 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:	msds@biognost.hr
	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:	NUCLEAR FAST RED (KERNECHTROT) REAGENT
	Identification number:	-
	Authorization number:	-
	Hazard pictograms:	-

Trading name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
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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/ EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
6409-77-4/ 229-088-0/ -	-	≤ 1%	Disodium 1-amino-2,4-dihydroxy- 9,10-dihydro-9,10-dioxoanthracene- 3-sulphonate	Skin Irr. 2; H315 Eye Irr. 2; H319 STOT SE; H335

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.

Trading name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
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	Following ingestion:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
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 ₂ 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.

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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. See Section 8 for information on personal protection equipment. 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 ³	
-	-	-	-	-

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

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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. Glove material: nitrile rubber Glove thickness: 0.40 mm 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
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SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties			
		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.
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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 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

SECTION 11. Toxicological information					
11.1 Information on toxicological effects					
Acute toxicity:					
Route of exposure:	Method	Species	Dose LD ₅₀ /LC ₅₀ or ATE _{mix}	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.				

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Symptoms related to the physical, chemical and toxicological characteristics						
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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.

Repeated dose toxicity (subacute, subchronic, chronic)						
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	Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No information available	-				
Subacute dermal	No information available	-				
Subacute inhalation	No information available	-				
Subchronic oral	No information available	-				
Subchronic dermal	No information available	-				
Subchronic inhalation	No information available	-				
Chronic oral	No information available	-				
Chronic dermal	No information available	-				
Chronic inhalation	No information available	-				

Specific target organ toxicity – repeated exposure (STOT RE):						
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	Specific effects	Target organ	Note
Subacute oral	No information available	No information available	-
Subacute dermal	No information available	No information available	-

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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:
	-

SECTION 12. Ecological information

12.1	Toxicity					
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-

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Algae/aquatic plants	IC ₅₀	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 ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC ₅₀	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				

12.3 Bioaccumulative potential

Octanol-water partition coefficient (log K_{ow})

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

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

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

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12.4 Mobility in soil

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

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	Adsorption / desorption				
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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	-

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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:

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.

SECTION 14 TRANSPORT INFORMATION

Transporting/shipment by road (ADR)

UN number: Not subject to transport regulations

UN proper shipping name: -

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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:	-
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:	-

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SECTION 15. Regulatory information	
15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulations	<p>Authorization and/or restrictions of use</p> <p>Authorizations: -</p> <p>Restrictions: -</p> <p>Other EU regulations: EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council; 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</p>
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	<p>Abbreviations and acronyms:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">PBT</td> <td>Stable, bioaccumulative and toxic</td> </tr> <tr> <td>vPvB</td> <td>Strongly stable and strongly bioaccumulative.</td> </tr> <tr> <td>LD₅₀</td> <td>Lethal dose, 50%</td> </tr> <tr> <td>LC₅₀</td> <td>Lethal concentration, 50%</td> </tr> <tr> <td>TCOJ</td> <td>Specific target organ toxicity - single exposure</td> </tr> </table>	PBT	Stable, bioaccumulative and toxic	vPvB	Strongly stable and strongly bioaccumulative.	LD ₅₀	Lethal dose, 50%	LC ₅₀	Lethal concentration, 50%	TCOJ	Specific target organ toxicity - single exposure
PBT	Stable, bioaccumulative and toxic										
vPvB	Strongly stable and strongly bioaccumulative.										
LD ₅₀	Lethal dose, 50%										
LC ₅₀	Lethal concentration, 50%										
TCOJ	Specific target organ toxicity - single exposure										
16.3.	Key literature references and source of data: -										

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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)	
	H315	Causes skin irritation.
	H: H319	Causes serious eye irritation.
	H335	May cause respiratory irritation.
16.6.	Training advice:	-
16.7.	Further information:	** "X" in the product code marks different volumes (different packagings 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.

ANNEX: Exposure scenario resulting to chemical safety assessment
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