

### **GRIMELIUS KIT**

The kit contains:

Acetate buffer, Grimelius

Hydroquinone - sodium sulphite

Nuclear Fast Red (Kernechtrot) reagent

Silver nitrate, 1% solution

Sodium thiosulfate, 5% solution



### According to Regulation (EC) No. 1907/2006 amended by Regulation (EU) No. 2020/878

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Trading name:	ACETATE BUFFER, GRIMELIUS				
Product code:	APG-OT-X**	Date of compilation:	21 Dec 2022	Version:	3

1.1.	Product identifier				
	Trading name:	ACETATE	ACETATE BUFFER, GRIMELIUS		
	Chemical name:	-	_		
	Catalogue number:	APG-OT-	X**		
1.2.	Relevant identified us	es of the su	bstance or mi	xture and uses advised against	
	Uses:		For use w	ith Grimelius kit.	
	Uses advised against:		Only the i	dentified uses are advised.	
	Reason why uses advi	uct is intended for use only as an <i>in vitro</i> diagnostic medical gistered at the Agency for Medicinal Products and Medical nd there is no reason to use it for other purposes			
1.3.	Details of the supplier	of the safe	ty data sheet		
	Supplier:		BioGnost Ltd.	BioGnost Ltd.	
	Address:		Medjugorska 59, Zagreb		
	Telephone number:		+385 1 2409997		
	Fax no.:	Fax no.: +		+385 1 2404039	
	e-mail of competent	person:	msds@biognost.hr		
	National contact:		-		
1.4.	Emergency telephone	Emergency telephone number			
	National Protection a	National Protection and Rescue Dire		112	
	Medical information:			+385 1 2348 342	
	Other information:			-	

SECTIO	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 fu	ll text of Hazard- and EU Hazard-sta	atements: see S	Section 16				
2.2.	Label elements						
	Product identification:	ACETATE BUI	FER, GRIMELIUS				
	Identification number:	-					
	Authorization no.:	-					
	Hazard pictograms:	-					



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	Signal word: -				
	Hazard statements: -				
	Precautionary statements: -				
	Further information: -				
2.3.	Other hazards				
	Endocrine Disrupting Properties:				
	No known endocrine disrupting properties				
	<b>Results of PBT and vPvB assessment</b> : According to the results of its assessment, this substance is not a PBT or a vPvB.				

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

SECTIO	SECTION 4. First aid measures				
4.1.	Description of first aid measures				
	General notes:		-		
	Following inhalation:		No information available		
	Following skin contact:		No information available		
	Following eye contact:		No information available		
	Following ingestion:		No information available		
	Self-protection of the first ai	der:	Treat symptomatically.		
4.2.	Most important symptoms a	nd eff	ects, both acute and delayed		
	Following inhalation:	No i	nformation available		
	Following skin contact:	No i	nformation available		
	Following eye contact:	No i	No information available		
	Following ingestion:	No i	information available		
4.3.	Indication of any immediate medical attention and special treatment needed				
	-				

SECTION	ON 5 Firefighting measures
5.1.	Extinguishing media



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

SECTIO	ON 6. Accidental release meas	ures			
6.1.	Personal precautions, protective equipment and emergency procedures				
6.1.1.	For non-emergency personne	el			
	Protective equipment:	Use personal protective equipment (see Section 8).			
	Accident prevention methods	Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke.			
	Emergency procedures:	Mark the area using proper signs.			
6.1.2.	For emergency responders:				
	Wear protective equipment (see Section 8).				
6.2.	Environmental precautions:				
	Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.				
6.3.	Methods and material for cor	ds and material for containment and cleaning up			
6.3.1.	Bunding, covering of drains; capping procedures:	Sand or clay barriers.			
6.3.2.	Cleaning up:	Where possible, the substance can be absorbed by using inflammable material (sand, diatomaceous earth, vermiculite). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and and involved materials with water.			
6.3.3.	Other information:	-			
6.4.	Reference to other sections				



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See Section 7 for information about secure handling.

See Section 8 for information about personal protective equipment.

See Section 13 for information about containment.

SECTIO	ON 7. Handling and storage							
7.1.	Precautions for safe handling							
7.1.1.	Protection measures							
	Measures to prevent fire:	Keep away from sources of heat and ignition. Do not smoke.						
	Measures to prevent aerosol and dust generati	on: 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 income	y incompatibilities						
	Technical measures and storage conditions:	Keep in tightly closed and upright set containers in a well ventilated storage rooms, and away from sources of heat, sunlight, and other incompatible substances.						
	Packaging materials:	Manufacturer's original packaging.						
	Requirements for storage rooms and vessels:	Keep away from food and drink. Keep the containers tightly closed.						
	Advices for storage equipment:	The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.						
	Further information on storage conditions:	Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9).						
7.3.	Specific end use(s)							
	Recommendations:	-						
	Industrial sector specific solutions:	-						

SECTIO	SECTION 8. Exposure controls/personal protection									
8.1.	Control parameters	Control parameters								
	Substance	CAS No	Occupational exposure limit values/short term values		Biological limit values					
			ppm mg/m³		-					



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Product co	Product code: APG-OT-X**		Γ- <b>X</b> **		Date of compilation		tion:	21 De	c 2022	Version: 3
			I					•	ı	
-			-			-		-	No infor	mation available
Substance name:	-									
EC No:	-		CAS No:	-						
DNEL										
					Inc	dustrial				
Route of		A	Acute		Acut	e		Chron	ic	Chronic
exposure:		effe	ect local	ef	ffect sys	temic		effect lo	ocal	effect systemic
Oral		-		-			-			-
Inhalation		-		-			-			-
Dermal		-		-			-			-
Critical phys	sical par	ameters: s	solubility, fla	mmabi	ility, cor	rosivity:		-		
					Co	nsumer				
Route of		A	Acute		Acut	e	Chronic		ic	Chronic
exposure:		effe	ect local	effect sys		temic	effect local		ocal	effect systemic
Oral		-		-			-			-
Inhalation		-		-		-			-	
Dermal		-		-			-			-
PNEC										
Environmer	ntal prot	ection tar	get			PNEC				
Fresh water	•					No information available				
Freshwater	sedimer	nts				No information available				
Marine wat	er					No information available				
Marine sedi	iments					No inforr	matior	n availabl	е	
Food chain						No inforr	matior	n availabl	e	
Microorgan	isms in	sewage tr	eatment			No information available				
Soil (agricul	tural)					No inforr	matior	n availabl	е	
Air				No inforr	matior	n availabl	е			
8.2.	Exposu	re contro	ls							
8.2.1.	Appro	oriate eng	ineering cor	ntrols						
	measu		ire related vent exposu I uses:	re :		•				Jse personal protective he workspace.
	Structu exposu		ires to preve	ent	No info	rmation av	/ailabl	e		



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	Organisational measures prevent exposure:	to	Organization of work in order to reduce other worker's influence during work process.						
	Technical measures to prexposure:	event	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.						
8.2.2.	Personal protection equi	pment							
8.2.2.1.	Eye and face protection:		Safety glasses that stick to face (preventing splashing) (EN 166) or visor.						
8.2.2.2.	Skin protection	Skin protection							
			tive gloves must be according to the EU Directive 2016/425/EEC and ard EN 374.						
	Hand protection:		Glove material: nitrile rubber						
			Glove thickness: ≥0.50 mm						
			Break through time: >480 min						
	Other skin protection:		ar antistatic clothing made of natural fibers (such as cotton) with long ves (EN 13034), and shoes that cover the entire foot (EN 10335).						
8.2.2.3.	Respiratory protection:	filter fo	tive full face mask (EN 136) or half mask (EN 140) equipped with a or organic vapors, type "A" (boiling point >65°C) acording to EN ) used when concentration levels exceed GVI.						
8.2.2.4.	Thermal hazards:	No inf	ormation available						
8.2.3.	Environmental exposure controls								
	Substance/mixture related measures to prevent exposure:		See Section 6						
	Structural measures to prescribe exposure:	revent	Use modern equipment.						
	Organisational measures prevent exposure:	to	Adapt the work process to the required working conditions of the workplace.						
	Technical measures to prevent exposure:		See Section 6						

SECTI	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/odour threshold:	no odor/no information available	No information available						
	Melting point / freezing point:	No information available	No information available						
	Boiling point or initial boiling point and boiling range:	No information available	No information available						



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	Flammability:	No information available	No information available
	Lower and upper explosion limit:	No information available	No information available
	Flash point:	No information available	No information available
	Auto-ignition temperature:	No information available	No information available
	Decomposition temperature:	No information available	No information available
	pH:	5.5 – 5.7	No information available
	Kinematic viscosity:	No information available	No information available
	Solubility:	No information available	No information available
	Partition coefficient n-octanol/water (log value):	No information available	No information available
	Vapour pressure:	No information available	No information available
	Density and/or relative density:	No information available	No information available
	Relative vapour density:	No information available	No information available
	Particle characteristics:	No information available	No information available
9.2.	Other information		
	-		

SECTIO	SECTION 10. Stability and reactivity						
10.1.	Reactivity: See subsections 10.3 through 10.5.						
10.2.	Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using.					
10.3.	Possibility of hazardous reactions:	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 toxic	Acute toxicity:									
Route of exposure:	Method	Species	Effective dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mixture</sub>	Exposure time	Results					
Oral exposure:	No information available	-	LD <sub>50</sub>	-	-					
Dermal exposure:	No information available	-	LD <sub>50</sub>	-	-					



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			:				:	:	
Inhalation	١	lo informatio	n _		LC <sub>50</sub>		_		_
exposure:		available			2030				
Specific	target	organ toxicity	y – single exp	osure (STO	T SE):				
		Sı	pecific effects	1	Taı	rget organ		Note	9
Oral exposure:		No informa	tion available		No inform	nation avai	lable -		
Dermal exposure:	•	No informa	tion available		No inform	nation avai	lable -		
Inhalation exposu	ıre:	No informa	tion available		No inform	nation avai	lable -		
Respirat	ory irri	tation:	ľ	No informat	ion availab	le			
Irritation	and c	orrosion							
		Exposure t	ime S	Species	Evaluatio	n Meth	od	Note	
Skin irritation:		-	-		-	-	-		
Eye irritation:		-	-		-	-	-		
			:	·		:	·		
Sensitiza	ition								
Dermal exposure:	: No	information	available						
Inhalation exposure:	No	information	available						
Symptor	ns rela	ited to the ph	ysical, chemi	cal and toxi	cological cl	haracteristi	cs		
Oral exposure:		No information	on available						
Dermal exposure:		No information	on available						
Inhalation exposu	ıre:	No information	on available						
Eye exposure:		No information	on available						
Repeate	d dose	toxicity (sub	acute, subchr	onic, chron	ic)				
		Dose	Exposure time	Species	Met	thod	Evaluation	Note	2
Subacute oral	No availa	information able	No information available	No informati available		ormation ilable	No informatic available	n -	
Subacute dermal	No availa	information able	No information available	No informati available		ormation ilable	No informatio available	ın -	



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Subacute inhalation	No ii availal	nformation ble	No information available	No informati available		rmation lable	No informati available	on -	
Subchronic oral	No ii availal	nformation ble	No information available	No informati available		rmation lable	No informati available	on -	
Subchronic dermal	No i availal	nformation ble	No information available	No informati available		rmation lable	No informati available	on -	
Subchronic inhalation	No i availal	nformation ble	No information available	No informati available		rmation lable	No informati available	on -	
Chronic oral	No i availal	nformation ble	No information available	No informati available		rmation lable	No informati available	on -	
Chronic dermal	No i availal	nformation ble	No information available	No informati available		rmation lable	No informati available	on -	
Chronic inhalation	No i availal	nformation ble	No information available	No informati available		rmation lable	No informati available	on -	
-					·			,	
Specific	target	organ toxicit	y – repeated	exposure (S	TOT RE):				
		S	pecific effects	S	Т	arget orga	an	N	ote
Subacute oral No information avail			tion available	ble No information available -			-		

	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 (carcinogenici	CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)					
Carcinogenicity:	No information available					
Mutagenicity in-vitro:	No information available					
Genotoxicity:	No information available					
Mutagenicity in-vivo:	No information available					



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***************************************	Germ cell mutagenicity:	No information available				
	Reproductive toxicity:	No information available				
	Summary of evaluation of the CM	AR properties: -				
11.2	Information on other hazards:					
11.2.1.	Endocrine disrupting properties:					
	The substance/mixture does not components considered to endocrine disrupting pro according to REACH Article 5 Commission Delegated regulation 2017/2100 or Commission Reg (EU) 2018/605 at levels of 0. higher.	have operties (7(f) or on (EU) qulation				
11.2.2.	Other information:					
	-					

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



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Algae/aq	quatic p	lants	IC <sub>50</sub>	72 hou	rs	No information available  No information available			-	-		
Other or	nanism	ς	_	_		_	avai	iabic			•	
Other or	941113111											
12.2.	2.2. Persistence and degradability											
	Abiotic	degra	adation									
		Deg	radation hal	f-lives		Method			Evaluatio	on		Note
Marine water	I No intormation available   No		No	information availa	able	No information available		ailable	-			
Fresh wa	iter	No inf	formation av	ailable	No	information availa	able	No inform	nation av	ailable	-	
Air		No inf	formation av	ailable	No	information availa	able	No inform	nation av	ailable	-	
Soil	il No information available No		No	information availa	able	No inform	nation av	ailable	_			
	Biodeg	radati	on	1			i					
% Degradation Time (days)				Method		Evaluatio	n	N	lote			
No informavailable		No ava	inforr ailable		No information available					No information available		
12.3.	Bioaccı	umula	tive potentia									
	Partitio	n coe	fficient: n-oc	tanol/wa	ter (l	og Kow):						
Value		Conce	entration	рН	°(	°C Method		Evaluation		Note		е
-	N av	o ir ⁄ailabl	nformation e	_	-	No information available		No information available		-		
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										
	Biocon	centra	ition factor (E	BCF)								
Value Species					Method		Evaluation			Vote		
					No information available		No information available		n			
	Chroni	c ecot	oxicity									



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					i		
	Value	Dose	Exposure time	Species	Method	Evaluation	Note
Chronic toxicity on fish		toxicity on fish $LC_{50}$ $IC_{50}$		nformation information		No information available	-
	Chronic toxicity on crustacea ( <i>Daphnia</i> )		No information available	No information available	No information available	No information available	-
12.4.	Mobility in :	soil					
	Known or p	redicted distribut	ion in environn	nental compart	ments:		
	No informa	tion available					
	Surface tens	sion:					
	Value	°C	Concentra	ation	Method	No	te

Value	°C	Concentration	Method	Note
No information available	No information available	No information available	No information available	

Ads	orption / desorption				
Transport	A/D coefficient	log Kow	Evanovation vota	Mothod	
Transport	Henry's constant	log Kow	Evaporation rate	Method	

·	Henry'	s constant		•		
Soil-water	No available	information	No information available	No information available	No information available	-
Water-air	No available	information	No information available	No information available	No information available	-
Soil-air	No available	information	No information available	No information available	No information available	-

#### 12.5. Results of PBT and vPvB assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### 12.6. Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.



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12.7.	Other adverse effects							
	No information available							
SECTIO	SECTION 13. Disposal considerations							
13.1.	Waste treatment methods							
13.1.1.	Product/Packaging disposal:							
	Submit for disposal to the legar	al person authorized by the Ministry of Environmental and Nature						
13.1.2.	Waste codes/waste designatio	ns according to Law:						
	No information available							
13.1.3.	Waste treatment – relevant information:							
	No information available							
13.1.4.	Sewage disposal – relevant info	ormation:						
	Waste must not be disposed o	f into the sewage system.						
13.1.5.	Other disposal recommendation	ons:						
	Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur.							
13.1.6.	Relevant Community provision	ns:						
	-							
SECTIO	N 14. Transport information							
	Transporting/shipment by road (	(ADR)						
UN num	iber:	Not subject to transport regulations.						
UN prop	per shipping name:	-						
Transpo	rt hazard class(es):	-						
Packing	group:	-						
Environr	mentally hazardous:	-						
Special p	orecautions for user:	-						



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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:	-
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: -	

SECTIO	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					



### SAFETY DATA SHEET According to Regulation (EC) No. 1907/2006

amended by Regulation (EU) No. 1907/2006

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Trading name:	ACETATE BUFFER, GRIMELIUS				
Product code:	APG-OT-X**	Date of compilation:	21 Dec 2022	Version:	3

	Authorizations:	-	
	Restrictions:	-	
	Other EU regulations:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC; Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC; Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work; Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006; REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);	
	Information according 199 guideline)	99/13/EC about limitation of emissions of volatile organic compounds (VOC-	
	Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values an 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 assessmen	nt	
	None		

SECTIO	SECTION 16. Other information				
16.1.	Indication of changes:	-			
16.2.	Abbreviations and acronyms:	ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  IMDG: International Maritime Code for Dangerous Goods  IATA: International Air Transport Association  GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances  CAS: Chemical Abstracts Service (division of the American Chemical Society)  DNEL: Derived No-Effect Level (UK REACH)  LC50: Lethal concentration, 50 percent  LD50: Lethal dose, 50 percent  PBT: Persistent, Bioaccumulative and Toxic  vPvB: very Persistent and very Bioaccumulative			



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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)				
Classifi	cation	Classification procedure			
_		-			
16.5.	Relevant H statements (number and full text)				
	H: -	-			
16.6.	.6. Training advice: -				
		** "X" in the product code marks different volumes (different packagings of the product)			
16.7.	Further information:	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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Trade name:		HYDROQUINONE	- SODIUM SULPH	ITE	
Product code:	HNS-15-X**	Date of compilation:	21 Dec 2022	Version:	3

SECTI	ION 1: Identification of the substance/mixture and of the company/undertaking					
1.1.	Product identifier					
	Trade name:	HYDROQL	INONE – SODIUM SULPHITE			
	Chemical name:	-				
	Catalogue number:	HNS-15-X	HNS-15-X**			
1.2.	Relevant identified use	es of the sub	stance or mixt	ure 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		y data sheet			
	Supplier:		BioGnost Ltd.			
	Address:		Medjugorska 59, Zagreb			
	Telephone number:		+385 1 2409997 +385 1 2404039			
	Telefax:					
	e-mail of competent p	erson:	msds@biogn	<u>ost.hr</u>		
	National contact:		-			
1.4.	Emergency telephone	numbers				
	National Protection ar	nd Rescue Di	rectorate:	112		
	Medical information:			+385 1 2348 342		
	Other information:	Other information:		-		

2.1				
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 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 fu	ıll text of Hazard- and EU Hazard-statements: se	ee SECTION 16		
2.2.	Label elements			



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Trade name:		HYDROQUINONE - SODIUM SULPHITE			
Product code:	HNS-15-X**	Date of compilation:	21 Dec 2022	Version:	3

	Product identification:	HYDROQUINONE, SOLUTION		
	Identification number:	-		
	Authorisation number:	-		
	Hazard pictograms:	GHS05 GHS07  GHS08 GHS09		
	Signal word:	Danger		
	Hazard statement:	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H400 Very toxic to aquatic life.		
	Precautionary statements:	P273 Avoid release to the environment.  P280 Wear protective gloves/protective clothing/eye protection/face protection.  P302+P352 IF ON SKIN: Wash with plenty of soap and water.  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  P308+P313 IF exposed or concerned: Get medical advice/attention.		
	Supplemetal hazard information (EU):	-		
2.3.	Other hazards			
	Endocrine Disrupting Proper No known endocrine disruptin Results of PBT and vPvB asse PBT or a vPvB.			

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



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Trade name:		HYDROQUINONE	YDROQUINONE - SODIUM SULPHITE		
Product code:	HNS-15-X**	Date of compilation:	21 Dec 2022	Version:	3

CAS/ EC/ Index number	REACH Registration No	Weight % content (or range)	Identification name	Classification according to Regulation (EC) No 1272/2008 (CLP)
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 classsified

4.1.	Description of first aid measures		
	General notes:	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Immediately remove any clothing soiled by the product.	
	Following inhalation:	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.	
	Following skin contact:	Remove contaminated clothing. Immediately wash with plenty of water and soap and rinse thoroughly. If symptoms persist, consult a doctor.	
	Following eye contact:	Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.	
	Following ingestion:	DO NOT induce vomiting. If symptoms persist, consult a doctor.	
	Self-protection of the first aider	Avoid direct contact with the chemical; use appropriate protective equipment described in Section 8.	
4.2.	Most important symptoms and effects, both acute and delayed		
	Following inhalation:	High concentration vapor inhalation may cause headache, dizziness, difficult breathing and unconsciousness.	
	Following skin contact:	Causes skin irritation, redness, swelling. Prolonged or repeated contact causes defatting and dry skin.	
	Following eye contact:	Vapors irritate eyes. Splashing may cause irritation and redness.	
	Following ingestion:	Nausea, vomiting (danger of aspiration), diarrhoea. Aspiration may cause headache, vertigo, nausea, dazed feeling-unconsciousness/coma, possible hypothermia, reactions to the heart/circulatory system such as vasodilation (flush), hypotension, arrhythmia (possible ventricular fibrillation through cardiac sensitization), danger of central respiratory paralysis or of cardiac arrest; functional disturbance to the liver and kidneys and persistent disturbance to the CNS as sequelae.	



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Trade name:		HYDROQUINONE	INONE - SODIUM SULPHITE		
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4.3.	Indication of any immediate medical attention and special treatment needed
	No further relevant information available.

SECTION 5. Firefighting measures				
5.1.	Extinguishing media			
	Suitable extinguishing media:	CO <sub>2</sub> , powder or water spray. Fight larger fires with water spray or alcohol resistant foam.		
	Unsuitable extinguishing media:	water with full jet		
5.2.	Special hazards arising from the subs	stance or mixture		
	Hazardous by products of fire:	Incomplete combustion of the product.		
5.3.	Advice for firefighters			
	Use a self-contained open-circuit cor	mpressed air breathing apparatus and fireproof clothing.		
5.4.	Additional information			
	Collect contaminated firefighting water separately.  Do not contaminate the environment with extinguishing media.			

SECTIO	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). Keep unprotected persons away.			
	Accident prevention methods	Evacuate members of all non-essential personnel and those members without protective equipment. Do not breathe in vapor, ensure adequate ventilation and avoid contact with skin and eyes. Remove all sources of sparks and ignition. 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 materials for containment and cleaning up				
6.3.1.	Bunding, covering of drains; capping procedures:	Sand or clay barriers.			



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Trade name:		HYDROQUINONE	INONE - SODIUM SULPHITE		
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6.3.2.	Cleaning up:	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and 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 and involved materials with water.	
6.3.3.	Other information:	Do not use tools that may cause sparks.	
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.		

SECTIO	ON 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 heat and ignition. Carry out measures for preventing static electricity.		
	Measures to prevent aerosol and dust generation	n:	Secure proper ventilation.		
	Measures to protect the environment:		Prevent spilling into the sewage system and waterways.		
	Other measures:		-		
7.1.2.	Advice on general occupational hygiene:				
	Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating.				
7.2.	Conditions for safe storage, including any incompatibilities				
	Technical measures and storage conditions:	Keep in tightly closed and upright set containers in a well ventilated storage rooms, and away from source of heat, sunlight, and other incompatible substances			
	Packaging materials:	Manufad	cturer's original packaging.		
	Requirements for storage rooms and vessels:	Keep aw tightly c	vay from food and drink. Keep the containers 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:	proper ventilation.  Do not place the unused material in the storage roc and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10).			



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Trade name:	HYDROQUINONE - SODIUM SULPHITE					
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7.3.	Specific end use(s)		
	Recommendations:	-	
	Industrial sector specific solutions:	-	

	industrial sector specific solutions.									
SECTIO	SECTION 8. Exposure controls/personal protection									
8.1.	Contr	ol para	meters							
Substance		CAS No			Occupational exposure limit values/short term values		Biological limit values			
						ppm		mg/m³		
Hydroqı	uinone	)		123-3	1-9	-/0,5		-/-	-	
Substan	ce:	_								
EC No:		-		CAS No:	-					
DNEL										
Industrial										
Doutoo	forms	CI INO.	Acu	te effect	Ac	cute effect	Chronic effect		ffect	Chronic effect
Route o	техро	sure:		local syst		systemic		local		systemic
Oral			-		-		-			-
Inhalatio	on		-		-		-			-
Dermal			-		-		-			-
Critical p	ohysica	al parar	neters: s	solubility, fla	mmabilit	y, corrosivity:		-		
						Consumer				
Route o	f expo	sure:		te effect local		cute effect systemic	Chronic effect local			Chronic effect systemic
Oral -		_		-	,	-			-	
Inhalation -		-		-		-			-	
Dermal -			-		-			-		
PNEC										
Environmental protection target				PNEC	PNEC					
Fresh water				No infor	No information available					
Freshwa	ter sec	diments	5			No infor	No information available			

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



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Air		No information available		
8.2.	Exposure controls			
8.2.1.	Appropriate engineering control	S		
	Substance/mixture related measures to prevent exposure during identified uses:	Use personal protective equipment. Do not eat, drink or smoke in the workspace.		
	Structural measures to prevent exposure:	No information available		
	Organisational measures to prevent exposure:	Organization of work in order to reduce other worker's influence during work process.		
	Technical measures to prevent exposure:	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.		
8.2.2.	Personal protection equipment:			
8.2.2.1.	Eye and face protection:	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU)		
8.2.2.2.	Skin protection			
	Hand protection:	Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.  Full contact:  Glove material: Viton Glove thickness: 0.7 mm Break through time: 480 min		
		Splash contact:  Glove material: Nitrile rubber  Glove thickness: 0.4 mm  Break through time: 35 min		
	Other skin protection:	Complete suit protecting against chemicals, flame retardant antistatic protective clothing (EN 13688). The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.		
8.2.2.3.	Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use type ABEK (EN 14387) respirator cartridges as a backup to engine protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as CEN (EU).		
8.2.2.4.	Thermal hazards:	No information available		



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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

.1.	Information on basic physical and chemical	al properties		
		Value	Method	
	Physical state:	solid	No information available	
	Physical state:	white	No information available	
	Colour:	No information available	No information available	
	Odour/odour threshold:	No information available	No information available	
	Melting point / freezing point:	No information available	No information available	
	Boiling point or initial boiling point and boiling range:	No information available	No information available	
	Flammability:	No information available	No information available	
	Lower and upper explosion limit:	No information available	No information available	
	Flash point:	No information available	No information available	
	Auto-ignition temperature:	No information available	No information available	
	Decomposition temperature:	No information available	No information available	
	рН:	No information available	No information available	
	Kinematic viscosity:	No information available	No information available	
	Solubility:	No information available	No information available	
	Partition coefficient n-octanol/water (log value):	No information available	No information available	
	Vapour pressure:	No information available	No information available	
	Density and/or relative density:	No information available	No information available	
	Relative vapour density:	No information available	No information available	
	Particle characteristics:	No information available	No information available	
2.	Other information			



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SECTIO	SECTION 10.: Stability and reactivity				
10.1.	Reactivity:	No relevant information available.			
10.2.	Chemical stability:	The product is chemically stable under recommended storage conditions.			
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			

11.1. Inform	ation on hazard clas	sses as def	ined in Regu	ulation (EC) No 127	72/2008			
Acute ·	toxicity:							
Route of exposure:	Method	Method Species		Effective Dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mixture</sub>	Exposure	e time	Results	
Oral:	No informatio available	n rat		LD <sub>50</sub>	No inform available	ation	367.3 mg/kg (hydroquinone)	
Dermal:	No informatio available	n -		-	No inform available	ation	367.3 mg/kg (hydroquinone)	
Inhalation:	No informatio available	n -		-	No inform available	ation	No information available	
: ·	•	ecific effe	cts	Target	Target organ		Note	
Oral:	No informatio				No information available -			
Dermal: Inhalation:	No informatio				No information available  No information available		No information available	
Aspira	tion hazard:		-					
Irritatio	on and corrosion							
		posure time	Species	Evaluation	Method		Note	
Skin corrosion/i	rritation -		-	-	-	No inf	ormation available	
Serious eye damage/irritation			_	_	_	NI = : = 4	ormation available	



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Trade name:		HYDROQUINONE	- SODIUM SULP	HITE	
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Sensitiz	ation						
Skin sensitization	1:	No informa	tion available				
Respiratory sensitization:		No informa	tion available				
Sympto	ms relat	ed to physic	al, chemical, a	nd toxicological	l properties		
Nausea, vomiting (danger of aspiration), diarrhoea. Aspiration may cause headache, vertige nausea, dazed feeling-unconsciousness/coma, possible hypothermia, reactions to the heart/circulatory system such as vasodilation (flush), hypotension, arrhythmia (possible ventricular fibrillation through cardiac sensitization), danger of central respiratory paralysis of cardiac arrest; functional disturbance to the liver and kidneys and persistent disturbance the CNS as sequelae.							is to the (possible tory paralysis or
Dermal exposure	7.	ses skin irrit skin.	ation, redness,	swelling. Prolo	nged or repeate	d contact causes	s defatting and
Inhalation exposure:	brea	athing and s	uffocating. Hig	gh concentration	n vapor inhalatio	ed by sore throat on may cause he and CNS disorde	
Eye exposure:			eyes. Splashing ohotophobia.	may cause irrit	ation and redne	ss, lacrimation, p	oain, swelling,
Repeate	ed dose	toxicity (sub	acute, subchro	nic, chronic)			
		Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No ir availab	nformation ble	No information available	No information available	No information available	No information available	-
Subacute dermal	No ir availab	nformation ble	No information available	No information available	No information available	No information available	-
Subacute inhalation	No ir availab	nformation ble	No information available	No information available	No information available	No information available	-
Subchronic oral	No ir availab	nformation ble	No information available	No information available	No information available	No information available	-
Subchronic dermal	No ir availab	nformation ble	No information available	No information available	No information available	No information available	-
Subchronic inhalation	No ir availab	nformation ble	No information available	No information available	No information available	No information available	-



11.2.2. Other information:

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Chronic ora	No information	n No information available	No information available	No information available	No informati available		-
Chronic der	mal No information	n No information available	No information available	No information available	No informati available		-
Chronic inhalation	No information	n No information available	No information available	No information available	No informati available		-
Sp	ecific target organ tox	icity - repeated e	exposure (STOT	-RE):			
·		Specific	effects	Target or	gan	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Note
Subacute o	ral	No information	available	No information a	available	_	
Subacute d	ermal	No information	n available	No information a	available	-	
Subacute in	halation	No information	available	No information a	available	-	
Subchronic	oral	No information	n available	No information available		-	
Subchronic	dermal	No information available		No information available		-	
Subchronic	inhalation	No information available		No information available		-	
Chronic ora	I	No information available		No information available		-	
Chronic der	mal	No information available		No information available		-	
Chronic inh	alation	No information	available	No information a	available	-	
CN	AR effects (carcinogeni	city, mutagenici	ty, reproductive	toxicity)			
	rcinogenicity:	<i>,,</i> 3	-	causing cancer.			
	utagenicity <i>in-vitro</i> :		No informatio				
	notoxicity:		No informatio				
	utagenicity <i>in-vivo</i> :		No informatio				
	rm cell mutagenicity :		Suspected of	causing genetic d	efects.		
Re	productive toxicity:		No informatio				
	mmary of evaluation	of the CMR	No informatio	n available			
11.2. Inf	ormation on other haz	vards:					
	docrine disrupting pro						
No	known endocrine of affect human health	lisrupting prope	erties				



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-

12.1. Toxicity						
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	fish	No information available	0.638mg/l (hydroquinone)	_
Crustacea:	EC <sub>50</sub>	48 hours	Daphnia magna	No information available	0.134 mg/l (hydroquinone)	_
Algae/aquatic plants:	IC <sub>50</sub>	72 hours	algae	No information available	0.33 mg/l (hydroquinone)	_
Other organisms:	-	-	-	-	-	-
Chronic (long-term) toxicity	Doza	Exposure time	Species	Method	Evaluation	Note
Fish	LC <sub>50</sub>	96 hours	No information available	No information available	No information available	_
Crustacea:	EC <sub>50</sub>	48 hours	No information available	No information available	No information available	<b>—</b>
Algae/aquatic plants:	IC <sub>50</sub>	72 hours	No information available	No information available	No information available	-
Other organisms:	-	-	-	-	-	-

#### 12.2. Persistence and degradability Abiotic degradation Degradation half-lives Method Evaluation Note Marine No information available No information available No information available water No information available No information available No information available Fresh water Air No information available No information available No information available Soil No information available No information available No information available Biodegradation



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Trade	name:					HYDR	OQUINONE	- SODIU	M SULPH	ITE			
Produc	ct code:	HNS-	15-X*	*	Dat	e of co	ompilation:	21 Dec	2022	١	Version:	3	
% Deg	radation	Tin	ne (day	ys)		M	1ethod	Ev	aluation		١	lote	
No info	ormation le	No available		rmation		o inforr ailable	mation	No info	ormation le		Extremely biodegrada	able.	
12.3.	Bioaccu	mulative p	otenti	al									
	Octanol	-water pa	rtition	coefficie	ent (l	og Pov	v)						
Valu	e (	Concentra	tion	рН		°C	Method		Evaluation			Note	
log Pov 0.59		inform ailable	nation	-	-		No information		information ilable	า	-		
	Bioconc	entration	Factor	(BCF)									
V	/alue	Citation	Spec				Method	Fv	/aluation			Note	
No info	rmation		ormati		No information		No info	No information		-			
availabl	ie	availal	oie			availal	oie	availab	ie				
	Chronic	ecotoxicit	·V										
	i .	000107			Fxn	osure							
	Value		Do	se	•	ime	Species	5 N	Method		Evaluation	Not	ιe
					10		No	No		No			
Chronic	toxicity o	on fish	LC <sub>50</sub>		nforn vaila	nation ble	informatio available		rmation ilable		ormation ailable	-	
Chronic	toxicity o	on			10		No	No		No			
	ea (Daphr		EC <sub>50</sub>		ntorn vaila	nation ble	informatic available	i i	rmation ilable		ormation ailable	-	
12.4.	Mobility	in soil											
	Known	or predicte	ed dist	ribution	in e	nvironr	nental compa	rtments:					
	No info	rmation av	/ailable	9									
	Surface	tension:											
							,						
		Value			۰C	_	Concen	tration		Me	thod	Not	<u>-</u>



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Trade name:		HYDROQUINONE	- SODIUM SULPHI	TE	
Product code:	HNS-15-X**	Date of compilation:	21 Dec 2022	Version:	3

	No information available		No ir available	nformation e	No information available	No information	available -	
		, , , , , , , , , , , , , , , , , , , ,						
		ion / desorption	1					
Transpo	rt	lenry's constant	•	log Kow	Evaporation rate	Method	Note	
Soil-Wat	ter No	informatio iilable	on No availa	informatio able	n No information available	No information available	-	
Water-A	ir No ava	informatio iilable	on No availa	informatio able	n No information available	No information available	-	
Soil-Air	No ava	informatio iilable	on No availa	informatio able	n No information available	No information available	-	
				•	ents considered to be cumulative (vPvB) at le	•		
12.6.	Endocrir The subsaccordir	aT), or very persone disrupting prostance/mixture	operties does not ticle 57(f)	no componed very bioaccontain comor Commiss	umulative (vPvB) at le ponents considered to ion Delegated regulat	o have endocrine d	ner. isrupting propertie	
	Endocrir The sub- accordir Regulati	ne disrupting prostance/mixture	operties does not ticle 57(f)	no componed very bioaccontain comor Commiss	umulative (vPvB) at le ponents considered to ion Delegated regulat	o have endocrine d	ner. isrupting propertie	
12.6.	Endocrir The sub- accordir Regulati	ne disrupting prostance/mixture on (EU) 2018/6	operties does not ticle 57(f) 05 at leve	no componed very bioaccontain comor Commiss	umulative (vPvB) at le ponents considered to ion Delegated regulat	o have endocrine d	ner. isrupting propertie	
12.7.	Endocrir The sub- accordir Regulati Other ac	ne disrupting prostance/mixture on (EU) 2018/6	operties does not ticle 57(f) 05 at leve	no componed very bioaccontain comor Commiss	umulative (vPvB) at le ponents considered to ion Delegated regulat	o have endocrine d	ner. isrupting propertie	
12.7.	Endocrir The sub- accordir Regulati Other ac	ne disrupting prostance/mixture ag to REACH Aron (EU) 2018/6	operties does not ticle 57(f) 05 at leve	no componed very bioaccontain comor Commiss	umulative (vPvB) at le ponents considered to ion Delegated regulat	o have endocrine d	ner. isrupting propertie	
12.7. <b>SECTIOI</b> 13.1.	Endocrir The sub- accordir Regulati Other ac No infor	ne disrupting prostance/mixture ag to REACH Arron (EU) 2018/6	operties does not ticle 57(f) 05 at leve e	no componed very bioaccontain comor Commiss	umulative (vPvB) at le ponents considered to ion Delegated regulat	o have endocrine d	ner. isrupting propertie	
12.7. SECTIOI	Endocrir The sub- accordir Regulati Other ac No infor	ne disrupting prostance/mixture ag to REACH Arron (EU) 2018/6 diverse effects mation available processing me	operties does not ticle 57(f) 05 at leve e rations thods	no componed very bioacc	umulative (vPvB) at le ponents considered to ion Delegated regulat	o have endocrine di	isrupting propertie or Commission	
12.7. <b>SECTIOI</b> 13.1.	Endocrir The sub- accordir Regulati Other ac No infor  N 13. Dis Waste  Produ Submi Protec	ne disrupting prostance/mixture ag to REACH Arron (EU) 2018/6 diverse effects mation available processing me	operties does not ticle 57(f) 05 at leve e  rations thods sposal:	contain componed very bioacc	ponents considered to higher.	o have endocrine di	isrupting propertie or Commission	



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Trade name:		HYDROQUINONE	- SODIUM SULPHI	ΓΕ	
Product code:	HNS-15-X**	Date of compilation:	21 Dec 2022	Version:	3

13.1.3.	Waste tretment – relevan	t information
	No information available	
13.1.4.	Sewage disposal – releva	
	Waste must not be dispo	sed of into the sewage system.
13.1.5.	Other disposal recommen	
	authorized by the ministr	oduct's remains into the sewage system. Submit the remains to the collectors y in charge. Do not dispose of the packaging into the sewage system. Submit ectors authorized by the ministry in charge. Do not dispose of in places where
13.1.6.	Relevant Community pro	visions:
	-	
SECTIO	N 14. Transport information	on
	Transporting/shipment by	road (ADR)
UN num	nber:	3077
	per shipping name:	Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
••••••	ort hazard class(es):	9
Packing		
	mental hazards:	Yes
Special	precautions for user:	-
	Transporting/shipment by	
UN num		3077
······································	per shipping name:	Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
······	ort hazard class(es):	9
Packing	<u> </u>	
	mental hazards:	Yes
Special	precautions for user:	-
	Transporting/shipment by	
UN num		3077
	per shipping name:	Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
······································	ort hazard class(es):	9
Packing		III
	mental hazards:	Yes
Special	precautions for user:	-



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Trade name:	HYDROQUINONE - SODIUM SULPHITE				
Product code:	HNS-15-X**	Date of compilation:	21 Dec 2022	Version:	3

Transporting/shipment by sea (II	MDG)
UN number:	3077
UN proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
Transport hazard class(es):	9
Packing group:	Ш
Environmental hazards:	Yes
Special precautions for user:	-
Transport in bulk condition in accordance with Annex II. of MARPOL 73/78 and IBC Codex:	-
Transporting/shipment by air (IC	AO-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:	-

SECTIO	SECTION 15. Regulatory information		
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture		
	EU regulations		
	Authorisation and/or restrictions on use		
	Authorisations: -		
	Restrictions: -		



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Trade name:	HYDROQUINONE - SODIUM SULPHITE				
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	Other EU regulations:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC; Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC; Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work; Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006; REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);
	Information according 19 guideline)	99/13/EC about limitation of emissions of volatile organic compounds (VOC-
	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 assessme	ent
	None	

SECTIO	SECTION 16. Other information			
16.1.	Indication of changes:	-		
16.2.	Abbreviations and acronyms:	ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  IMDG: International Maritime Code for Dangerous Goods  IATA: International Air Transport Association  GHS: Globally Harmonised System of Classification and Labelling of Chemicals  EINECS: European Inventory of Existing Commercial Chemical Substances  CAS: Chemical Abstracts Service (division of the American Chemical Society)  DNEL: Derived No-Effect Level (UK REACH)  LC50: Lethal concentration, 50 percent  LD50: Lethal dose, 50 percent  PBT: Persistent, Bioaccumulative and Toxic  vPvB: very Persistent and very Bioaccumulative		
16.3.	Key literature references and source of data:	-		



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Trade name:	HYDROQUINONE - SODIUM SULPHITE				
Product code:	HNS-15-X**	Date of compilation:	21 Dec 2022	Version:	3

16.4.	Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)		
Classif	Classification		Classification procedure
_			-
16.5.	Rele	evant H statements (num	ber and full text)
		302	Harmful if swallowed.
		317	May cause an allergic skin reaction.
	H:	318	Causes serious eye damage.
		341	Suspected of causing genetic defects.
		351	Suspected of causing cancer.
		400	Harmful if swallowed.
16.6.	Trai	ning advice:	-
			** "X" in the product code marks different volumes (different packaging of the product)
16.7. Further information:		her information:	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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Trade name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT			Г
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

1.1.	Product identifier				
	Trade name:	NUCLEAR F	AST RED (K	(ERNECHTROT) REAGENT	
	Chemical name:	-			
	Catalogue number:	KR-OT-X**			
1.2.	Relevant identified uses of the substance or mixture and uses advised against				
	Uses:		Count	erstain in many special staining kits.	
	Uses advised against:		Only t	he identified uses are advised.	
	Reason why uses advised against:		medic	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: BioG		ioGnost Ltd	nost Ltd.	
	Address: Med		ledjugorska	jugorska 59, Zagreb	
	Telephone number: +385		385 1 2409	5 1 2409997	
	Telefax:	Telefax: +38		5 1 2404039	
	e-mail of competent p	person: <u>m</u>	ısds@biogr	s@biognost.hr	
	National contact:	National contact: -			
1.4.	Emergency telephone	number			
	National Protection a	National Protection and Rescue Directo		112	
	Medical information:			+385 1 2348 342	
	Other information:			-	

SECTIO	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 catego	ry code: Hazard statement*:			
	Not identified as hazardous subs	stance			
2.1.2.	Additional information				
	-				
* For fu	ıll text of Hazard- and EU Hazard-s	tatements: see SECTION 16			
2.2.	Label elements				
	Product identification:	NUCLEAR FAST RED (KERNECHTROT) REAGENT			
	Identification number:	-			
	Authorisation number:	-			
	Hazard pictograms:	-			



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Trade name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4	

	Signal word:	-
	Hazard statement:	-
	Precautionary statements:	-
	Supplemetal hazard information (EU)	-
2.3.	Other hazards	
	Endocrine Disrupting Properties:	
	No known endocrine disrupting prop	erties.

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		

SECTI	CTION 4. First aid measures				
4.1.	Description of first aid meas	ures			
	General notes:	-			
	Following inhalation:	Remove person to fresh air. If breathing stops, immediately apply artificial respiration. If breathing difficulties occur, use emergency breathing apparatus. If the symptoms persist, immediately consult a physician.			
	Following skin contact:	Remove all contaminated clothes using sterile gauze. 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. Do not induce vomiting. 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:	No information available			
	Following skin contact:	No information available			
	Following eye contact:	No information available			
	Following ingestion:	No information available			



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Trade name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4	

4.3.	Indication of any immediate medical attention and special treatment needed
	No information available

SECTIO	SECTION 5. Firefighting measures				
5.1.	Extinguishing media				
	Suitable extinguishing media:		Water, CO <sub>2</sub> , foam, dry powder		
	Unsuitable extinguishing medi	a:	No information available		
5.2.	Special hazards arising from the substance or mixture				
	Hazardous combustion products:	No information available.			
5.3.	Advice for firefighters				
	Firefighters must always use fireproof suit and self-sustaining breathing apparatus with open circle that contains pressurized air in case of fire in closed space.				
5.4.	Additional information				
	Prevent spills and water used for putting out fire from contaminating waterways by enclosing and covering drains.				

SECTIO	ON 6. Accidental release measures			
6.1.	Personal precautions, protective equipment and emergency procedures			
6.1.1.	For non-emergency personnel			
	Protective equipment:	Use protective equipment in accordance with Section 8. Do not get in eyes or on skin. Do not inhale vapor/aerosols. Remove the persons not directly involved in rescuing procedure from the scene of event.		
	Accident prevention methods:	Keep away from heat, flames and sparks.  Secure proper ventilation.  Prevent electrostatic charge buildup.  Use only grounded devices and equipment.  Do not release in drains - explosion hazard.		
	Emergency procedures:	In case of accident secure the location and evacuate the personnel not involved in recovery.		
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:			
	age system and waterways. In case of large spillage contact National (NPRD) on 112.			
6.3.	Methods and material for containr	nent and cleaning up		



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Trade name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4	

6.3.1.	Bunding, covering of drains; capping procedures:	Sand bags.			
6.3.2.	Cleaning up:	Where possible, soak up the product using inert matter, such as sand, silica gel, saw dust). 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 and involve materials with water.			
6.3.3.	Other information:	Recovery of contaminated area should only be conducted by qualified person that uses stipulated protective equipment. Prevent the waste water from entering waterways.			
6.4.	Reference to other sections				
	See Section 7 for information about secure handling.				
	See Section 8 for information about personal protective equipment.				
	See Section 13 for info	See Section 13 for information about containment.			

SECTIO	ON 7. Handling and storage				
7.1.	Precautions for safe handling				
7.1.1.	Protective measures				
	Measures to prevent fire:		Keep away from heat, flames and sparks. Secure proper ventilation.		
	Measures to prevent aerosol and dust generation:  Measures to protect the environment:  Other measures:		Adequate ventilation of the rooms where the product is kept and handled. Containers must be firmly closed.		
			Keep the containers firmly closed in vertical position when the product is not used. Prevent the product from entering waterways, sewerage and drainage systems by using barrage and semi-barrage made of sand, as well as covering the drainage by using plastic foil.		
			-		
7.1.2.	Advice on general occupational hygiene:				
	Do not eat, drink or smoke in the workspace. Th	oroughly	y wash hands after work and before eating.		
7.2.	Conditions for safe storage, including any incom	patibiliti	ies		
	Technical measures and storage conditions: be firm		, cold and well-ventilated space. Containers must mly closed. Maintain adequate ventilation of the s where the product is kept and handled.		
	Packaging materials:	Manu	facturer's original packaging.		
	Requirements for storage rooms and vessels. Keep a		away from food and drink. Keep the containers y closed.		



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Trade name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
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	Advices for storage equipment:	Keep away from heat, flames, sparks and sunlight.
	Further information on storage conditions:	Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9).
7.3.	Specific end use(s)	
	Recommendations:	Secure stations for rinsing eyes and showering in the vicinity of work area.
	Industrial sector specific solutions:	-

SECTION 8. Exposure controls/personal protection									
8.1. Con	trol para	meters							
Substance			CAS No			Occupational exposure limit values/short term values		Biological limit values	
					ppm	mg/m³			
-			-		-	-		-	
Substance name:									
EC No:	-		CAS No:	-					
DNEL									
					Industrial				
Route of exposure:		Acute effect		Ad	cute effect	Chronic e	effect	Chronic effect	
Noute of exp	osuie.	local		!	systemic	local		systemic	
Oral -		-	-			-		-	
Inhalation		-		-		-		-	
Dermal		-		-		-		-	
Critical physic	al paran	neters: s	olubility, fla	mmabilit	y, corrosivity:				
					Consumer				
Route of exp	ocura.	Acu	Acute effect Acu		cute effect	Chronic e	effect	Chronic effect	
Noute of exp	osure.		local	!	systemic	local		systemic	
Oral		-		-		-		-	
Inhalation			-		-				
Dermal		-		-		-		-	
PNEC									
Environmenta	al protec	tion targ	get		PNEC				
Fresh water				No info	No information available				



Freshwater sediments

## SAFETY DATA SHEET According to Regulation (EC) No. 1907/2006 amended by Regulation (EU) No. 2020/878

No information available

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			<u>l</u>		
Marine wa	ater		No information available		
Marine se	diments		No information available		
Food chai	'n		No information available		
Microorga	anisms in sewage treatment		No information available		
Soil (agric	cultural)		No information available		
Air			No information available		
8.2.	Exposure controls				
8.2.1.	Appropriate engineering control	S			
	Substance/mixture related measures to prevent exposure during identified uses:	Use the product in well ventilated rooms. Use personal protect equipment. Do not eat, drink or smoke in the workspace.			
	Structural measures to prevent exposure:	In acco	rdance 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.			
8.2.2.	Personal protection equipment				
8.2.2.1.	Eye and face protection:	levels o	glasses that stick to face (EN 166) or visor in case of lower f concentration in air; protective gas mask that covers the ace in case of higher levels of concentration in air.		
8.2.2.2.	Skin protection				
	Hand protection:		ive gloves must be according to the EU Directive 25/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥0.50 mm Break through time: >480 min		
	Other skin protection:	Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 13034), and shoes that cover the entire foot (EN 10335).			
8.2.2.3.	Respiratory protection:	Suitable mask or half mask equipped with a combined "A-P" filter and used when concentration levels exceed GVI.			
8.2.2.4.	Thermal hazards:	No info	rmation available		
8.2.3.	Environmental exposure controls				
	Substance/mixture related measures to prevent exposure:	See Sec	tion 6		



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Trade name:		NUCLEAR FAST RED (KERNECHTROT) REAGENT					
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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

.1.	Information on basic physical ar	nd chemical properties	
		Value	Method
	Physical state:	liquid	No information available
	Colour:	red	No information available
	Odour/odour threshold:	No information available	No information available
	Melting point / freezing point:	No information available	No information available
	Boiling point or initial boiling point and boiling range:	No information available	No information available
	Flammability:	No information available	No information available
	Lower and upper explosion limit:	No information available	No information available
	Flash point:	No information available	No information available
	Auto-ignition temperature:	No information available	No information available
	Decomposition temperature:	No information available	No information available
	pH:	No information available	No information available
	Kinematic viscosity:	No information available	No information available
	Solubility:	No information available	No information available
	Partition coefficient noctanol/water (log value):	No information available	No information available
	Vapour pressure:	No information available	No information available
	Density and/or relative density	No information available	No information available
	Relative vapour density:	No information available	No information available
	Particle characteristics:	No information available	No information available
9.2.	Other information		

SECTIO	N 10.: Stability and reactivity	
10.1.	Reactivity:	See subsections 10.3 through 10.5.



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Trade name:		NUCLEAR FAST RED (KERNECHTROT) REAGENT					
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4			

10.2.	Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using.
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.

11.1. Information	n on toxicological effe	cts					
Acute toxic	ity:						
Route of exposure:	Method	Species	Effective dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mixture</sub>	Exposu	re time	Results	
Oral:	No information available	_	No information available	No infor avail		_	
Dermal:	No information available	_	No information available	No infor avail		_	
Inhalation:	No information available	_	No information available	No infor		_	
Specific tar	get organ toxicity – si	ngle exposure (	(STOT SE):				
	Specific 6	Specific effects		Target organ		Note	
Oral:	No information avail	able	No information a	No information available -			
Dermal:	No information avail	able	No information a	available	-		
Inhalation:	No information avail	able	No information a	available	-		
Aspiration	hazard:	-					
leritation of	nd corrosion						
IIIItation ai	Exposure tim	ne Sr	pecies Evaluatio	n Me	ethod	Note	
Skin corrosion/irritation:	-	-	-	-		No information available	
Serious eye damage/irritation	-	-	-	-		No information available	



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Trade name:		NUCLEAR FAST RED (KERNECHTROT) REAGENT					
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4			

Sensitiz	ation					
Dermal exposure	: No informatio	n available				
Inhalation exposure:	No informatio	n available				
Sympto	ms related to the p	ohysical, chemic	cal and toxicolog	jical characterist	ics	
Oral exposure:	No informatio	n available				
Dermal exposure	: No informatio	n available				
Inhalation exposure:	No informatio	n available				
Eye exposure:	No informatio	n available				
Repeate	ed dose toxicity (su	bacute, subchro	onic, chronic)			
· ·	Dose	Exposure time	Species	Method	Evaluation	Note
Subacute oral	No information available	No information available	No information available	No information available	No information available	-
Subacute dermal	No information available	No information available	No information available	No information available	No information available	-
Subacute inhalation	No information available	No information available	No information available	No information available	No information available	-
Subchronic oral	No information available	No information available	No information available	No information available	No information available	-
Subchronic dermal	No information available	No information available	No information available	No information available	No information available	-
Subchronic inhalation	No information available	No information available	No information available	No information available	No information available	-
Chronic oral	No information available	No information available	No information available	No information available	No information available	-
Chronic dermal	No information available	No information available	No information available	No information available	No information available	-



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Trade name:		NUCLEAR FAST RED (KERNECHTROT) REAGENT								
Product code:	le: KR-OT-X** Date of compilation: 14 November 2022		KR-OT-X** Date of comp		2022	Ve	ersion:	4		
Chronic inhalation	No info	information information available		No informat available		No information available	No information	on	-	
Specific	target o	rgan toxic	rity – repeated e	xposure (S	STOT	RE):				
<u> </u>		1	Specific effects	•		Target orga	n		No	te
Subacute oral		No infor	mation available	e	No in	formation availa	ble	-		
Subacute derma		No infor	mation available	е	No in	formation availa	ble	-		
Subacute inhalat	ion	No infor	mation available	е	No in	formation availa	ble	-		
Subchronic oral		No infor	mation available	е	No in	formation availa	ble	-		
Subchronic derm	nal	No infor	mation available	ailable No i		information available			-	
Subchronic inhal	ation	No infor	mation available	le No information available		ble	-			
Chronic oral		No infor	mation available	e No information available			ble	-		
Chronic dermal		No infor	mation available	le No information available -						
Chronic inhalation	on	No infor	mation available	e	No in	formation availa	ble	_		
CMR ef	fects (car	cinogenic	ity; mutagenicity	y; reprodu	ctive 1	coxicity)				
Carcino	genicity:			No infor	matic	n available				
Mutage	enicity <i>in-</i>	vitro:		No information available						
Genoto	xicity:			No information available						
Mutage	enicity <i>in-</i>	vivo:		No information available						
Germ c	ell mutag	enicity:		No information available						
Reproductive toxicity:			No infor	matic	n available					
Summa propert	-	valuation	of the CMR	No infor	matic	n available				
11.2. Informa	ation on c	other haza	ırds:							
11.2.1. LIIUUCII	Endocrine disrupting properties:									

SECTION 12. General notes:
12.1. Toxicity

No known endocrine disrupting properties

that affect human health.

Other information:

11.2.2.



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Trade name:		NUCLEAR FAST RED (F	(ERNECHTROT) REAGENT	Γ
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

Acute (short-terr toxicity	n) Do	se Expo		Species	Method	Eval	uation	No	ote
Fish	LC <sub>50</sub> 96 hours		ıırc	No information available	-	No inforr available	mation	-	
Crustacea: EC <sub>50</sub> 48 hour		iirc	No information available	-	No inforr available	mation	-		
Algae/aquatic pl	ants IC <sub>50</sub>	72 ho	ıırc	No information available	-	No inforr available	nation	-	
Other organisms	-	-		_	-	-		-	
Chronic (long-te toxicity	rm) Do	se Expo		Species	Method	Eval	uation	No	ote
Fish	LC <sub>50</sub>	96 ho	iirc	No information available	-	No inforr available	mation	-	
Crustacea:	EC <sub>50</sub>	48 ho	iirc	No information available	-	No inforr available	mation	-	
Algae/aquatic pl	ants IC <sub>50</sub>	72 ho	ıırc	No information available	-	No inforr available	mation	-	
Other organisms	-	-		-	-	-		-	
	nce and deg degradation	•				****			
	Degrada	tion half-live	S	Method		E۱	/aluation		Note
Marine water		tion available		No information available		No information availab			-
Fresh water		tion available		No information available		No information availab			-
Air		tion available		No information available		No information available			-
Soil	No informa	tion available	· 1	No information available No information			ation available	e	-
Biodegr	adation								
% Degradation		(days)		Method	Eva	aluation	No	ote	
No information No information		No in	No information available		nformation ble	No informat	o information availabl		
12.3. Bioaccu	mulative po								
	-water parti								



Trade name:

## SAFETY DATA SHEET According to Regulation (EC) No. 1907/2006 amended by Regulation (EU) No. 2020/878

**NUCLEAR FAST RED (KERNECHTROT) REAGENT** 

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Produc	t code	:	KR-OT-X**	Date o	f compila	ation:	14	Novem	ber 2022	Versi	on: 4
No informa available	: avallania		_	lo in vailab	formation le	No availal	informatio ble	n No available	information		
			<u> </u>	i_							
	Bioco	ncenti	ration factor (E	BCF)							
V	alue		Specie	es	N	1ethod	l	Evalu	ıation	١	Note
No info			No informatio available	n	No info			lo inform vailable	nation	No inform available	ation
	Chror	nic ecc	otoxicity								
:	Valu	e	Dos	Δ :	Exposure Speci		Species	Method		Evaluation	Note
Chronic	toxicit	y on fi	ish LC <sub>50</sub>		information in		rmation lable	information		lo nformation vailable	-
Chronic crustace			EC <sub>50</sub>	1	o No formation information vailable available					lo nformation vailable	-
			·	·		-			i		i
12.4.	Mobil	ity in :	soil								
	Know	n or p	redicted distri	bution in	environme	ental c	ompartme	ents:			
	No in	forma	tion available								
	Surfac	e ten	sion:								
	Vá	alue	°C	C	Concentrat	tion	N	Method		No	ote
	No inforn availa	nation ble	No informatic available	n i	No information available		No inforr available	mation	-		
						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
	Adsor	ption	/ desorption								
Transpo	ort		'D coefficient nry's constant	lo	og Kow	Εv	aporation	rate	Method	l Note	



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Trade name:		NUCLEAR FAST RED (I	KERNECHTROT) REAGEN	Γ
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

Soil-wat	ter No information available	No information available	No information available	No information available	-	
Water-a	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 asse	ssment				
	No information available					
12.6.	Endocrine disrupting propert					
	No known endocrine disrupti	ng properties that	affect the environm	nent.		
12.7.	Other adverse effects					
	No information available					
SECTIO	N 13. Disposal consideration	S				
13.1.	Waste treatment methods					
13.1.1.	Product/Packaging disposa					
	Submit for disposal to the I Protection.	egal person autho	rized by the Ministr	y of Environmental a	and Nature	
	1 Totection.					
13.1.2.	Waste codes/waste designa	ations according to	o Low:			
	15 01 10*: packaging that c			s or is contaminated	d with hazardous	
	substances					
13.1.3.	Waste treatment – relevant	information:				
	No information available					
13.1.4.	Sewage disposal – relevant	information:				
	Waste must not be dispose	d of into the sewa	ge system.			
13.1.5.	Other disposal recommend	ations:				



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Trade name:		NUCLEAR FAST RED (I	KERNECHTROT) REAGEI	NT
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

	Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur.				
13.1.6.	Relevant Community pr	ovisions:			
		agement Act, Ordinance on Waste Management, Regulation on categories, types te with waste catalog and list of hazardous waste			
SECTIO	N 14. Transport informati	ion			
SECTIO	Transporting/shipment by				
UN num		Not subject to transport regulations			
	per shipping name:	-			
	rt hazard class(es):	-			
Packing		-			
·····	mental hazards:	_			
Special	precautions for user:	-			
•	Transporting/shipment by	rail (RID)			
UN num		Not subject to transport regulations			
UN prop	per shipping name:	-			
Transpo	rt hazard class(es):	-			
Packing	group:	-			
Environi	mental hazards:	-			
Special	precautions for user:	-			
	Transporting/shipment by	r inland waterways (ADN)			
UN num	nber:	Not subject to transport regulations			
UN prop	per shipping name:	-			
Transpo	rt hazard class(es):	-			
Packing	group:	-			
Environi	mental hazards:	-			
Special	precautions for user:	-			
	Transporting/shipment by	r sea (IMDG)			
UN num	nber:	Not subject to transport regulations			
UN proper shipping name:		-			
Transpo	rt hazard class(es):	-			
Packing	group:	-			
Environmental hazards:		Not subject to transport regulations			



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Trade name:	NUCLEAR FAST RED (KERNECHTROT) REAGENT				
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4	

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:	-		
Environmental hazards:	-		
Special precautions for user:	-		
Further information: -			

5.1. Safety, health and en	rironmental regulations/legislation specific for the substance or mixture
EU regulations	
Authorisations and/o	restrictions of use
Authorisations:	-
Restrictions:	-
Other EU regulations:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC; Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC; Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work; Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006; REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);



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Trade name:		Ţ		
Product code:	KR-OT-X**	Date of compilation:	14 November 2022	Version: 4

	National regulation:	Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Transport of Hazardous Substances Act
15.2.	Chemical safety assessment	
	None	

SECTIO	ON 16. Other information	
16.1.	Indication of changes:	-
16.2.	Abbreviations and acronyms:	ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  IMDG: International Maritime Code for Dangerous Goods  IATA: International Air Transport Association  GHS: Globally Harmonised System of Classification and Labelling of Chemicals  EINECS: European Inventory of Existing Commercial Chemical Substances  CAS: Chemical Abstracts Service (division of the American Chemical Society)  DNEL: Derived No-Effect Level (UK REACH)  LC50: Lethal concentration, 50 percent  LD50: Lethal dose, 50 percent  PBT: Persistent, Bioaccumulative and Toxic  vPvB: very Persistent and very Bioaccumulative
16.3.	Key literature references and source of data:	-
16.4.	Classification and procedure 1272/2008 (CLP)	used to derive the classification for mixture according to Regulation (EC)
Classifi	ication	Classification procedure
-		-
16.5.	Relevant H statements (num	ber 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** 



## According to Regulation (EC) No. 1907/2006 amended by Regulation (EU) No. 2020/878

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### According to Regulation (EC) No. 1907/2006 amended by Regulation (EU) No. 2020/878

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Trading name:	SILVER NITRATE, 1% SOLUTION				
Product code:	SN1-OT-X**	Date of compilation:	21 Dec 2022	Version:	3

1.1	Product identifier		<u>-</u>	and of the company/undertaking		
	Trading name:	SILVER NITI	RATE, 1% :	SOLUTION		
	Chemical name:	-	-			
	Catalogue number:	SN1-OT-X*	SN1-OT-X**			
1.2	Relevant identified use	es of the subs	tance or n	nixture and uses advised against		
	Uses:		For use	with Grimelius kit.		
	Uses advised against:		Only the	identified uses are advised.		
	Reason why uses advi	sed 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 shee	t		
	Supplier:		BioGnost Ltd.			
	Address:		Medjugorska 59, Zagreb +385 1 2409997			
	Telephone number:					
	Telefax.:		+385 1 2	2404039		
	e-mail of competent p	erson:	msds@b	<u>piognost.hr</u>		
	National contact:		-			
1.4	Emergency telephone	number				
	National Protection ar	d Rescue Dire	ectorate:	112		
	Medical information:			+385 1 2348 342		
	Other information:			-		

SECTIO	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 catego	ory code:	Hazard statements*:				
	Aquatic Chronic 3		H412				
2.1.2.	Additional information						
	_						
*For ful	l text of Hazard- and EU Hazard-	statements: see S	SECTION 16				
2.2	Label elements						
	Product identification:	SILVER NITRATE	E, 1% SOLUTION				
	Identification number: -						
	Authorization number:	Authorization number: -					
	Hazard pictograms:	-					



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Trading name:	SILVER NITRATE, 1% SOLUTION				
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	Signal word:	-			
	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.			
	Supplemetal hazard information (EU):	-			
2.3	Other hazards				
	Endocrine Disrupting Prope	erties:			
	No known endocrine disrupting properties				
	<b>Results of PBT and vPvB assessment</b> : According to the results of its assessment, this substance is not PBT or a vPvB.				

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			

SECTI	ON 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 ef	fects, both acute and delayed



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Trading name:		SILVER NITRATE, 1% SOLUTION						
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	Following inhalation:	Depending on concentration and exposure time, it may lead to mucosa irritation, cough, and dyspnea.			
	Following skin contact:	Depending on concentration and exposure time, it may lead to irritation, rash, skin drying and skin cracking.			
	Following eye contact:	Depending on concentration and exposure time, it may lead to irritation, tearing, redness and pain.			
	Following ingestion:	Danger of gastric perforation.			
4.3	Indication of any immediate medi	edical attention and special treatment needed			
	-				

SECTIO	SECTION 5. Firefighting measures					
5.1	Extinguishing media					
	Suitable extinguishing media:	Water spray, foam, dry powder, CO <sub>2</sub> or alcohol resistant foam.				
	Unsuitable extinguishing media: Water with full jet.					
5.2	Special hazards arising from the substance or mixture					
	Hazardous combustion products: Nitrogen oxides (NOx). During heating or in case of fire poisonougases 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 environm	ent with extinguishing media.				

SECTIO	ECTION 6. Accidental release measures						
6.1	Personal precautions, protective equipment and emergency procedures						
6.1.1.	For non-emergency personnel						
	Protective equipment:	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 ca (see Section 8).	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 conta	inment and cleaning up					



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Trading name:		SILVER NITRATE, 1% SOLUTION						
Product code:	SN1-OT-X**	Date of compilation:	21 Dec 2022	Version:	3			

6.3.1.	Bunding, covering of drains; capping procedures:	Sand or clay barriers.				
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 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 8 for information	See Section 7 for information on safe handling.  See Section 8 for information on personal protection equipment.  See Section 13 for disposal information.				

SECTION	ON 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	on:	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				
	·	Keep in tightly closed and upright set containers at temperatures ranging from +2 to +8 °C.			
	Packaging materials:	Manufactu containers	cturer's original packaging. Avoid metal ers.		
	Requirements for storage rooms and vessels:	Keep away tightly clos	y from food and drink. Keep the containers sed.		
	Advices for storage equipment:	must be re	ge must be made of hard material; floors esistant to chemicals. There must be no drain ly leads into sewage system. Secure proper n.		
	Further information on storage conditions:	and do no	ace the unused material in the storage room of use empty containers for storing other. Do not store with incompatible materials on 10).		



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Product code:	SN1-01	Γ-X**		Dat	e of	of compilation: 21 Dec 2		ec 2022	Version:	3	
7.3 Specific e											
Recomme						<b>-</b>					
Industrial	sector spe	cific solut	tions:			-					
SECTION 8. Expos	sure contr	als/nersa	nal nr	ntectio	n						
_	arameters	015, pc150									
σ μ					Occur	pational	exposur	e limit			
Substance	9	CA	S No				term va		Biolo	gical limit values	;
					pp	om	mg/	′m³		-	
-			-			-	1			-	
Substance name:	-										
EC No:	-	CAS No	):	-							
DNEL											
			In		Indu	dustrial					
Route of	Acı			Acute			Chro			Chronic	
exposure:	effect	local	effec	t syste	mic		effect l	ocal		effect systemic	
Oral	-		-			-			-		
Inhalation	-		-			-			-		
Dermal	-		-			-					
Critical physical pa	rameters: :	solubility,	flamm								
	Τ .		1		Cons	sumer					
Route of exposure:		ute t local		Acute					Chronic effect systemic		
Oral	- eneci	liocai	ened	i syste	THIC	- effect local		_	enect systemic		
Inhalation	-		_								
Dermal	_		_			_					
PNEC	<u>  -</u>					<u> </u>					
Environmental pro	tection tar	aet			Р	PNEC					
Fresh water		<u> </u>			n	no information available					
Freshwater sediments			n	no information available							
Marine water				n	no information available						
Marine sediments					n	no information available					
Food chain					n	no inforn	nation av	/ailable			
Microorganisms in	sewage tr	eatment			n	o inforn	nation av	/ailable			
Soil (agricultural)					n	no information available					



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Trading name:		SILVER NITRATE, 1% SOLUTION							
Product code:	SN1-OT-X**	Date of compilation:	21 Dec 2022	Version:	3				

Air			no information available			
8.2	Exposure controls					
8.2.1.	Appropriate engineering controls					
	Substance/mixture related measure prevent exposure during identified		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 prever exposure:	nt	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			
8.2.2.	Personal protection equipment	t				
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:	Protect	tive nitrile gloves, >0.11 mm thick (EN 374).			
	Other skin protection:		nntistatic clothing made of natural fibers (such as cotton) ng sleeves (EN 340) and shoes that cover the entire foot.			
8.2.2.3.	Respiratory protection:		quired under normal conditions of use. Use suitable tory protective device when high concentrations are t.			
8.2.2.4.	Thermal hazards:	No info	ormation available			
8.2.3.	Environmental exposure controls					
	Substance/mixture related measures to prevent exposure:	See Se	ction 6			
	Structural measures to prevent exposure:	Use mo	odern equipment.			
	Organisational measures to prevent exposure:	Adapt workpl	the work process to the required working conditions of the ace.			
	Technical measures to prevent exposure:	See Se	ction 6			

#### **SECTION 9. Physical and chemical properties**

9.1 Information on basic physical and chemical properties



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Trading name:		SILVER NITRATE, 1% SOLUTION						
Product code:	SN1-OT-X**	Date of compilation:	21 Dec 2022	Version:	3			

		Value	Method
	Physical state:	liquid	No information available
	Colour:	colourless	No information available
	Odour/odour threshold:	no information available	No information available
	Melting point / freezing point:	No information available	No information available
	Boiling point or initial boiling point and boiling range:	No information available	No information available
	Flammability:	No information available	No information available
	Lower and upper explosion limit:	No information available	No information available
	Flash point:	No information available	No information available
	Auto-ignition temperature:	No information available	No information available
	Decomposition temperature:	No information available	No information available
	pH:	No information available	No information available
	Kinematic viscosity:	No information available	No information available
	Solubility:	No information available	No information available
	Partition coefficient n-octanol/water (log value):	No information available	No information available
	Vapour pressure:	No information available	No information available
	Density and/or relative density:	No information available	No information available
	Relative vapour density:	No information available	No information available
	Particle characteristics:	No information available	No information available
)	Other information		

SECTIO	ECTION 10. Stability and reactivity							
10.1	Reactivity:	See subsections 10.3 through 10.5.						
10.2	Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using.						
10.3	Possibility of hazardous reactions:	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						

SECTIO	DN 11. Toxicological information
11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008
	Acute toxicity:



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Trading name:		S	ILVER NI	TRATE, 1%	SOLUTI	ON			
Product code:	SN1-OT-X	r* Da	ate of com	pilation:	21 Dec	2022	Vei	rsion:	3
Route of exposure:	Method	Species		LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mix</sub>	Ехр	osure time		Resul	ts
Oral:	-	No information available		_	No inf availal	formation ble		-	
Dermal:	-	No information available		_	No inf availal	ormation ble		-	
Inhalation:	-	No information available		_	No inf availal	formation - ble			
Specific t	arget organ to	xicity – single expo	osure (STO	T SE):					
	S	pecific effects		Targe	t organ			Note	
Oral:	No informa	tion available	N	o informatio	n availabl	e -			
Dermal:	No informa	tion available	N	o informatio	e -				
Inhalation:	No informa	tion available	N	o informatio	n availabl	e -			
:		1							
Aspiration	n hazard:	N	o informat	ion available	<u>.</u>				
Irritation	and corrosion					1			
	Ехро	osure time	Species	Evalua	ation	Method		Note	
Skin corrosion/irritation	ր: -	-		-	-		-		
Serious eye damage/irritation	-	-		<b>–</b>	_		-		
i									
Sensitizat	ion								
Skin sensitization:	-								
Respiratory sensiti	zation: -								
Symptom	ns related to th	e physical, chemic	al and toxi	cological cha	aracteristi	CS			
Oral exposure:	No inform	mation available.							
Dermal exposure:	No infor	mation available.							
Inhalation exposu	re: No inform	mation available.							
Eye exposure:	No infor	mation available.							
Repeated	dose toxicity	(subacute, subchro	onic, chroni	ic)					
	Dose	Exposure time	Species	Meth	nod	Evaluatio	n	Note	



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Product code:	SN1-OT-X**	Date of compilation:	21 Dec 2022	Version:	3

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

	Specific 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	_



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Trading name:		SILVER NITRATE, 1%	SOLUTION		
Product code:	SN1-OT-X**	Date of compilation:	21 Dec 2022	Version:	3

	Carcinogenicity:	No information available.
	Mutagenicity in vitro:	No information available.
	Genotoxicity:	No information available.
	Mutagenicity in vivo:	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.	Information on other hazards:	
11.2.1.	Endocrine disrupting properties:	
	No known endocrine disrupting properties that affect human health.	
11.2.2.	Other information:	

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



No information

available

No

available

information No information

available

No information

available

#### **SAFETY DATA SHEET**

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Trading name	):			9	SILVER NITRA	TE, 1%	SOLUT	ION		
Product code	: S	N1-OT-X*	-OT-X**		ate of compila	tion:	21 De	c 2022	Version:	
Crustacea:		EC <sub>50</sub>	48 hours		No information available	No inforr availa	mation Ible	No information available	-	
Algae/aquatic p	c plants IC <sub>50</sub> 72 hours		No informa available		No information available		No information available	-		
Other organism	าร	-	-	-	-	-		-	-	
	c degra	nd degrada dation gradation h	-		Method		Evaluatio	n	Note	
		nformation			information ilable		formation		- Note	
Fresh water No information		nformation	available		information ilable	No information available		١ -	-	
Air	No information availabl		available		information ilable	No information available		۱ -	-	
Soil No inf		nformation	available	No information available		No information available		า		
Biode	gradatio	on								
% Degradati	on	Time (	days)		Method		Evaluatio	n	Note	
No information available		No ir available	nformation	No information available		No in availa	formation ble	n No i avail	nformation able	
12.3 Bioacc	umulat	ive potentia	al							
Octan	ol-wate	er partition o	coefficient (l	og K	ow)					
Value	Conce	ntration	рН	°C	Method		Evalua	ation	Note	
-   -				•	-		_	-		
Biocor	ncentra	tion factor (	(BCF)							
Value		Speci	es		Method		Evaluation	on	Note	



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Chronic to	Thronic eco			Date	of cor	mpilatio	on:	21 Dec	2022	Versio	n: 3
Chronic to	Value			Exposure							
Chronic to	Value			Exposure							
Chronic to	Value			Exposure							
Chronic to	oxicity on f	ich		time	Spe	ecies	Metl	nod	Evaluatio	n	Note
	Chronic toxicity on fish LC <sub>50</sub>		LC <sub>50</sub>	information in		No nformation available		1	No informatio available	n -	
Chronic toxicity on crustacea ( <i>Daphnia</i> )		No information available	formation informatio				No informatio available	n -			
12.4 Mobility in soil											
			d distributi	on in environme	ental c	omnart	ments:				
	lo informa					part					
	urface ten										
_	Value		°C	Concentrat	ion		Metho	od		Note	
ir	No No information available available			No information available		on No information available		n -			
Δ	dsorption	/ desor	•								
Transport		nry's co		log Kow	Ev	aporati	on rate	N	1ethod		Note
Soil-water	No	inf	formation	No informatio available		o inform ailable	nation No in availa		ormation ole	_	
Water-air	No availal		formation	No informatio available		o information vailable		No inf availal	ormation ole	-	
Soil-air	No availal		formation	No information available		No information available		ation No informat available		-	
12.5 R	esults of F	PBT and	vPvB asses	sment							
				ins no compone and very bioacc				•			lative and



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12.6.	Endocrine disrupting prope	erties				
12.0.	The substance/mixture doe according to REACH Article	es not contain components considered to have endocrine disrupting properties e 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission				
	Regulation (EU) 2018/605 a	at levels of 0.1% or higher.				
12.7.	Other adverse effects					
	No information available					
	1					
SECTIO	N 13. Disposal consideration	ons				
13.1	Waste treatment method	ls				
	i .					
13.1.1.	Product/Packaging dispo	sal:				
	Submit for disposal to the Protection.	e legal person authorized by the Ministry of Environmental and Nature				
12.12						
13.1.2.		nations according to Law:				
	Packaging that contains r	residual hazardous substances or is contaminated with hazardous substances				
13.1.3.	Waste treatment – releva	nt information:				
	No information available					
13.1.4.	Sewage disposal – releva	nt information:				
	Waste must not be dispo	sed of into the sewage system.				
13.1.5.	Other disposal recommen					
	authorized by the ministr	oduct's remains into the sewage system. Submit the remains to the collectors y in charge. Do not dispose of the packaging into the sewage system. Submit ectors authorized by the ministry in charge.				
13.1.6.	Relevant Community pro	visions:				
	-					
SECTIO	N 14 TRANSPORT INFORM	MATION				
	Transporting/shipment by	road (ADR)				
UN nur		Not subject to transport regulations				
······	per shipping name:	-				
······································	ort hazard class(es):	-				
Packing	g group:	-				



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Environmentally hazardous:	-
Special precautions for user:	-
Transporting/shipment by rail (R	ID)
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 (IN	MDG)
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 (IC	AO-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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15.1	Safety, health and enviror	nmental regulations/legislation specific for the substance or mixture			
	EU regulations				
	Authorization and/or restrictions of use				
	Authorizations:	-			
	Restrictions:	-			
	Other EU regulations:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC; Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC; Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work; Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006; REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);			
	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 assessme	ent			
	None				

SECTION 16. Other information	
16.1 Indication of changes:	-



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16.2	16.2 Abbreviations and acronyms:		ADR: Accord relatif au transport international des marchandises dangereuses pa route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  IMDG: International Maritime Code for Dangerous Goods  IATA: International Air Transport Association  GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances  CAS: Chemical Abstracts Service (division of the American Chemical Society)  DNEL: Derived No-Effect Level (UK REACH)  LC50: Lethal concentration, 50 percent  LD50: Lethal dose, 50 percent  PBT: Persistent, Bioaccumulative and Toxic  vPvB: very Persistent and very Bioaccumulative			
16.3.	Key literature references and source of data:		-			
16.4. Classification and procedure 1272/2008 (CLP)		•	used to derive the classification for mixture according to Regulation (EC)			
Classifi	catio	า	Classification procedure			
_			-			
16.5.	Rel	evant H statements (numl	per and full text)			
		272	May intensify fire; oxidiser.			
		314	Causes severe skin burns and eye damage.			
	H:	400	Very toxic to aquatic life.			
		410	Very toxic to aquatic life with long lasting effects.			
		412	Harmful to aquatic life with long lasting effects			
16.6.	Training advice:		-			
16.7.	Fur	ther 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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Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022	Version:	4	

SECTI	ON 1. Identification of	the substa	nce/mixture a	and of the company/undertaking		
1.1.	Product identifier					
	Trading name:	SODIUM	1 THIOSULFATE	HIOSULFATE, 5% SOLUTION		
	Chemical name:	-				
	Catalogue number:	NT5-OT	-X**			
1.2.	Relevant identified us	nt identified uses of the substance or mixture and uses advised against				
	Uses:		For use with	special staining kits.		
	Uses advised against:		Only the ider	ntified uses are advised.		
	Reason why uses advi against:	sed	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 safe	ety data sheet			
	Supplier:		BioGnost Ltd.			
	Address:		Medjugorska 59, Zagreb			
	Telephone number:		+385 1 2409997			
	Fax no.:		+385 1 2404039			
	e-mail of competent p	erson:	msds@biognost.hr			
	National contact:		-			
1.4.	Emergency telephone	number				
	National Protection ar	nd Rescue	Directorate:	112		
	Medical information:	Medical information:		+385 1 2348 342		
	Other information:			-		

SECTIO	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 substa	ance.	-	
2.1.2.	Additional information			
	-			
*For fu	ll text of Hazard- and EU Hazard-sta	tements: see S	ection 16	
2.2.	Label elements			
	Product identification:	SODIUM THI	DSULFATE, 5% SOLUTION	
	Identification number: -			
	Authorization no.:	-		
	Hazard pictograms:	-		



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Trading name:	S	ODIUM THIOSULFATE, 5% SOLUTION		
Product code:	NT5-OT-X**	Date of compilation:	21 Dec 2022	Version: 4

	Signal word:	-	
	Hazard statements:	-	
	Precautionary statements:	-	
	Further information:	-	
2.3.	Other hazards		
	Endocrine Disrupting Properties	:	
	No known endocrine disrupting properties		
	<b>Results of PBT and vPvB assessment</b> : According to the results of its assessment, this substance is not a PBT or a vPvB.		

SECTION 3. Composition/information on ingredients				
CAS/ EC/ Index no.	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	ON 4. First aid measures		
4.1.	Description of first aid meas	ires	
	General notes:	-	
	Following inhalation:	Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. If breathing becomes erratic or it stops, immediately apply artificial respiration (other than mouth-to-mouth) and contact a physician.	
	Following skin contact:	Remove contaminated clothing. Immediately wash with plenty of water and soap. Seek medical assistance if the symptoms of irritation remain.	
	Following eye contact:	Rinse out with plenty of water with the eyelid held wide open using clean fingers. If the symptoms remain, immediately call a physician.	
	Following ingestion:	Do not induce vomiting. Make the afflicted person drink a glass of water. If spontaneous vomiting occurs, wash the mouth with water, then make the person drink 100-200 ml of water and seek medical attention.	
	Self-protection of the first ai	der: Treat symptomatically.	
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.	



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Trading name:	SODIUM THIOSULFATE, 5% SOLUTION				
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	Following eye contact:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
	Following ingestion:	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.
4.3.	Indication of any immediate medical attention and special treatment needed	
	-	

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

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



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

SECTIO	ON 7. Handling and storage			
7.1.	Precautions for safe handling			
7.1.1.	Protection measures			
	Measures to prevent fire:	Keep away from sources of heat and ignition. Do not smoke.		
	Measures to prevent aerosol and dust generation:	Secure proper ventilation.		
	Measures to protect the environment: Other measures:	Prevent spilling into the sewage system and waterways.		
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 we ventilated storage rooms, and away from sources of hea sunlight, and other incompatible substances.		
	Packaging materials:	Manufacturer's original packaging.		
	Requirements for storage rooms and vessels:	Keep away from food and drink. Keep the containers tightly closed.		
	Advices for storage equipment:	The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.		
	Further information on storage conditions:	Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9).		
7.3.	Specific end use(s)			
	Recommendations:	-		
	Industrial sector specific solutions:	-		



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-		ols/person	ai protec	uon				
8.1. Control para	meters							
Substance					cupational exposure limit values/short term values		Biological limit values	
				ppm	1	mg/m³		
-		-		-		-	No information available	
Substance - name:								
EC No: -		CAS No:	-					
DNEL			·		•			
				Indust	rial			
Route of	A	Acute		Acute		Chronic	Chronic	
exposure:	effe	ect local	effe	ct system	ic	effect local	effect systemic	
Oral	-		-			-	-	
Inhalation	-		-			-	-	
Dermal	-		-			-	-	
Critical physical para	meters: s	solubility, fla	ammabili	ty, corrosi	vity:	-		
				Consu	mer			
Route of	A	Acute		Acute		Chronic	Chronic	
exposure:	effe	ect local	effe	ct system	ic	effect local	effect systemic	
Oral	-		-			-	-	
Inhalation	-		-			-	-	
Dermal	-		-			-	-	
PNEC								
Environmental protection	ction tar	get		PN	IEC			
Fresh water				No	o inform	ation available		
Freshwater sediment	S			No	inform	ation available		
Marine water				No	No information available			
Marine sediments			No	No information available				
Food chain			No	No information available				
Microorganisms in sewage treatment			No	No information available				
Soil (agricultural)				No	inform	ation available		
Air					٠,	ation available		



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8.2.	Exposure controls				
8.2.1.	Engineering measures				
	Substance/mixture related measures to prevent exposure during identified uses:		Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace.		
	Structural measures to pre exposure:	event	No information available		
	Organisational measures prevent exposure:	to	Organization of work in order to reduce other worker's influence during work process.		
	Technical measures to pre exposure:	event	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.		
8.2.2.	Personal protection equip	ment			
8.2.2.1.	Eye and face protection:	Safety glasses that stick to face (preventing splashing) (EN 1 visor.			
8.2.2.2.	Skin protection		4		
	Hand protection:		tive gloves must be according to the EU Directive 2016/425/EEC and ard EN 374.  Glove material: nitrile rubber  Glove thickness: ≥0.50 mm  Break through time: >480 min		
	Other skin protection:		antistatic clothing made of natural fibers (such as cotton) with long s (EN 13034), and shoes that cover the entire foot (EN 10335).		
8.2.2.3.	Respiratory protection:	filter fo	tive full face mask (EN 136) or half mask (EN 140) equipped with a or organic vapors, type "A" (boiling point >65°C) acording to EN ) used when concentration levels exceed GVI.		
8.2.2.4.	Thermal hazards:	No inf	ormation available		
8.2.3.	Environmental exposure of	ontrols			
	Substance/mixture related measures to prevent expo		See Section 6		
	Structural measures to pre exposure:	event	Use modern equipment.		
	Organisational measures prevent exposure:	to	Adapt the work process to the required working conditions of the workplace.		
	Technical measures to pre exposure:	event	See Section 6		

SECTIO	ON 9. Physical and chemical properties		
9.1.	Information on basic physical and chen	nical properties	
		Value	Method



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Physical state:	liquid	No information available
Colour:	colourless	No information available
Odour/odour threshold:	no information available	No information available
Melting point / freezing point:	No information available	No information available
Boiling point or initial boiling point and boiling range:	No information available	No information available
Flammability:	No information available	No information available
Lower and upper explosion limit:	No information available	No information available
Flash point:	No information available	No information available
Auto-ignition temperature:	No information available	No information available
Decomposition temperature:	No information available	No information available
рН:	No information available	No information available
Kinematic viscosity:	No information available	No information available
Solubility:	No information available	No information available
Partition coefficient n-octanol/water (log value):	No information available	No information available
Vapour pressure:	No information available	No information available
Density and/or relative density:	No information available	No information available
Relative vapour density:	No information available	No information available
Particle characteristics:	No information available	No information available
Other information		

SECTIO	ON 10. Stability and reactivity	
10.1.	Reactivity:	See subsections 10.3 through 10.5.
10.2.	Chemical stability:	The product is chemically stable under standard ambient conditions of storing and using.
10.3.	Possibility of hazardous reactions:	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

SECTIO	ON 11. Toxicological information
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
	Acute toxicity:



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Route of exposure:	Method	Species	Effective dose LD <sub>50</sub> /LC <sub>50</sub> or ATE <sub>mixture</sub>	Expos tim	RASHIT	
Oral exposure:	No information available	_	LD <sub>50</sub>	-	-	
Dermal exposure:	No information available	-	LD <sub>50</sub>	-	-	
Inhalation exposure:	No information available	-	LC <sub>50</sub>	-	-	
Specific ta	rget organ toxicity – s	ingle exposure	(STOT SE):			
	Specific	effects	Target organ		Note	
Oral exposure:	No information	available	No information available	_		
Dermal exposure:	No information	available	No information available	-		
	No information available		No information	-		
Inhalation exposure Respirator			available ormation available			_
Respirator	y irritation: nd corrosion	No info	ormation available	Meth	Note	
Respirator Irritation a	y irritation:  nd corrosion  Exposure time	No info	ormation available  Evaluation	Meth od	Note	
Respirator Irritation a Skin irritation:	y irritation:  nd corrosion  Exposure time	No info	ermation available  Evaluation	Meth od	_	
Respirator Irritation a	y irritation:  nd corrosion  Exposure time	No info	ormation available  Evaluation	Meth od		
Respirator Irritation a Skin irritation:	y irritation:  nd corrosion  Exposure time -	No info	ermation available  Evaluation	Meth od	_	
Respiratory  Irritation a  Skin irritation:  Eye irritation:	y irritation:  nd corrosion  Exposure time -	Species	ermation available  Evaluation	Meth od	_	
Respirator Irritation a Skin irritation: Eye irritation:	y irritation:  nd corrosion  Exposure time	Species	ermation available  Evaluation	Meth od	_	
Respiratory  Irritation a  Skin irritation:  Eye irritation:  Sensitization  Dermal exposure:  Inhalation exposure:	y irritation:  nd corrosion  Exposure time  No information avail	Species ilable	Evaluation	Meth od -	_	
Respiratory  Irritation a  Skin irritation:  Eye irritation:  Sensitization  Dermal exposure:  Inhalation exposure:	y irritation:  nd corrosion  Exposure time  No information avail	Species ilable ilable al, chemical and	ermation available  Evaluation	Meth od -	_	
Respiratory  Irritation a  Skin irritation:  Eye irritation:  Sensitization  Dermal exposure: Inhalation exposure:  Symptoms	y irritation:  nd corrosion  Exposure time  No information available related to the physic	Species  ilable ilable al, chemical and vailable	Evaluation	Meth od -	_	
Respiratory  Irritation a  Skin irritation:  Eye irritation:  Sensitization  Dermal exposure:  Inhalation exposure:  Symptoms  Oral exposure:	y irritation:  nd corrosion  Exposure time  No information available related to the physical No information a No information a No information a No information a	Species  Ilable Ilable al, chemical and vailable vailable	Evaluation	Meth od -	_	



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

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



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Chronic	c inhalation	No informa	tion available	No information available	-
	CMR effects (	(carcinogenicity	y, mutagenicity, re	eproductive toxicity)	
	Carcinogenic	ity:	Based on av	ailable data, the classification criteria	a are not met.
	Mutagenicity	in-vitro:	Based on av	ailable data, the classification criteria	a are not met.
	Genotoxicity:		Based on av	ailable data, the classification criteria	a are not met.
	Mutagenicity	in-vivo:	Based on av	ailable data, the classification criteria	a are not met.
	Germ cell mu	tagenicity:	Based on av	ailable data, the classification criteria	a are not met.
	Reproductive	toxicity:	Based on av	ailable data, the classification criteria	a are not met.
	Summary of o	evaluation of th	ne CMR propertie	s: -	
				S: -	
	Information o	on other hazard	ds:	S: -	
	Information of Endocrine dis	on other hazard	ds: rties:	s: -	
11.2	Information of Endocrine dis The substance components endocrine according to Commission 2017/2100 of Endocrine dis Endocrine according to Commission 2017/2100 of Endocrine dis Endocrine dis Endocrine according to Commission 2017/2100 of Endocrine dis Endocrine dis Endocrine dis Endocrine according to Commission 2017/2100 of Endocrine dis E	on other hazard	ds: rties: s not contain to have properties cle 57(f) or ulation (EU) Regulation	s: -	
	Information of Endocrine dis The substance components endocrine according to Commission 2017/2100 of (EU) 2018/66	on other hazard srupting proper e/mixture does considered disrupting or REACH Artion Delegated reg or Commission 05 at levels	ds: rties: s not contain to have properties cle 57(f) or ulation (EU) Regulation	S:   -	

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



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

12.2. Pers	sistence and degradability			
Abi	otic 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	-

Biodegr	adation			
% Degradation	Time (days)	Method	Evaluation	Note
No information available				

Pa	rtition coefficient: n-oc	tanol/wa	ter (log	Kow):		
Value	Concentration	рН	°C	Method	Evaluation	Note
	No information available	-	-	No information available	No information available	-

Bioconcentration factor (BCF)



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	Value		Species	Me	ethod	Evaluation		Note	
No infavailab	ormation ole	No availa	informati ble	on No inform available	ation	No information available	No info	ormation ava	ilable
	Chronic e	ecotoxici	ty						
	Value		Dose	Exposure time	Species	Method	Eva	lluation	Note
Chroni	ic toxicity o	n fish	LC <sub>50</sub>	No information available	No information available	No information available	No info	ormation ble	-
	ic toxicity or cea ( <i>Daphni</i>		EC <sub>50</sub>	No information available	No information available	No information available	No info	ormation ble	-
	No inforr Surface t		vailable						
	Surface t	ension:							
	_								
	Value		°C	Concentra	tion	Method		N <sub>1</sub>	ote
	No informati available	on in		No informat available	ion	Method formation avail	able	- N	ote
	No informati	on in	o formation	No informat	ion		able		ote
	No informati	on in av	o formation vailable	No informat	ion		able		ote
Transp	No informati available  Adsorption	on in av	o formation vailable orption	No informat	ion No int				Note
Transp Soil-w	No informati available  Adsorption	on in av	o formation vailable orption	No informat available	Evapo	formation avail		- Method ormation	
	No informati available  Adsorption  oort  ater No avai	on in av	o formation vailable orption orption officient	No information available  log Kow	Evapo  No inforn available	ration rate	No info	Method ormation ole ormation	



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12.5.	Results of PBT and vPvB assessment
***************************************	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.6.	Endocrine disrupting properties
	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.7.	Other adverse effects
	No information available
SECTIO	N 13. Disposal considerations
13.1.	Waste treatment methods
13.1.1.	Product/Packaging disposal:
	Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.
13.1.2.	Waste codes/waste designations according to Law:
	No information available
13.1.3.	Waste treatment – relevant information:
	No information available
13.1.4.	Sewage disposal – relevant information:
	Waste must not be disposed of into the sewage system.
13.1.5.	Other disposal recommendations:
	Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur.
13.1.6.	Relevant Community provisions:



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SECTION 14. Transport information	
Transporting/shipment by roa	ad (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	I (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 (AI	ON)
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	a (IMDG)
UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-
Special precautions for user:	-
Transporting/shipment by air	(ICAO-TI/IATA-DGR)
UN number:	Not subject to transport regulations.
UN proper shipping name:	-
Transport hazard class(es):	-
Packing group:	-
Environmentally hazardous:	-



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Special precautions for user:		-
Further information:	-	

15.1.	Safety, health and enviro	Safety, health and environmental regulations/legislation specific for the substance or mixture		
	EU regulations			
	Authorization and/or rest	trictions of use		
	Authorizations:	-		
	Restrictions:	-		
	Other EU regulations:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC; Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC; Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work; Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006; REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);		
	Information according 19 guideline)	999/13/EC about limitation of emissions of volatile organic compounds (VOC-		
	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 assessme	ent		
	None			

SECTION 16. Other information	
16.1. Indication of changes:	-



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16.2.	Abbreviations and acronyms:	ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  IMDG: International Maritime Code for Dangerous Goods  IATA: International Air Transport Association  GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances  CAS: Chemical Abstracts Service (division of the American Chemical Society)  DNEL: Derived No-Effect Level (UK REACH)  LC50: Lethal concentration, 50 percent  LD50: Lethal dose, 50 percent  PBT: Persistent, Bioaccumulative and Toxic  vPvB: very Persistent and very Bioaccumulative
16.3.	Key literature references and source of data:	-
16.4.	Classification and procedure u 1272/2008 (CLP)	sed to derive the classification for mixture according to Regulation (EC)
Classifi	cation	Classification procedure
-		-
16.5.	Relevant H statements (number	er 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.

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**Exposure scenario resulting to Chemical safety assessment** 

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