

BIOGRAM ECO KIT

The kit contains:

Gram Crystal Violet, phenol-free reagent
Gram Sodium hydrogencarbonate, solution
Gram Lugol solution, stabilized
Gram Decolorizer solution 2
Gram Safranin solution



Page 1 of 17

Trading name:	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT				
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2

SECTI	ON 1: Identification of t	he substance	e/mixture	and of the company/undertaking	
1.1	Product identifier				
	Trading name:	GRAM CRYS	STAL VIOL	ET, PHENOL FREE REAGENT	
	Chemical name:	-			
	Catalogue number:	GCF-OT-X*	*		
1.2	Relevant identified use	Relevant identified uses of the substance or mixture and uses advised against			
	Uses:		For use	in microbiology for staining according to Gram.	
	Uses advised against:		Only the	e identified uses are advised.	
	Reason why uses advised against:		The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes.		
1.3	Details of the supplier of the safety data sheet				
	Supplier:		BioGnost Ltd.		
	Address:		Medjugorska 59, Zagreb		
	Telephone number:		+385 1 2409997		
	Telefax.:		+385 1 2404039		
	e-mail of competent p	erson:	msds@b	<u>piognost.hr</u>	
	National contact:		-		
1.4	Emergency telephone	Emergency telephone number			
	National Protection an	d Rescue Dire	ectorate:	112	
	Medical information:			+385 1 2348 342	
	Other information:			-	

SECTIO	ON 2. Hazards identification				
2.1	Classification of the substance or mixture				
2.1.1	Classification according to	Classification according to Regulation (EC) No 1272/2008 (CLP)			
	Hazard class and ca	Hazard class and category code: Hazard statements*:			
	Flam. Liq. 3 H226		H226		
2.1.2.	Additional information				
	-				
*For fu	ıll text of Hazard- and EU Haza	ard-statements: see	SECTION 16		
2.2	Label elements				
	Product identification:	Product identification: GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT			
	Identification number:	-			
	Authorization number:	-			



Page 2 of 17

Trading name:	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT				
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2

	Hazard pictograms:	GHS02	
	Signal word:	Danger	
	Hazard statements:	H226 Flammable liquid and vapor.	
	Precautionary statements:	P210 Keep away from heat, hot sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P280 Wear protective gloves/protective clothing/eye/protection/face protection.	
	Supplemetal hazard information (EU):	-	
2.3	Other hazards		
	The product has no other known specific hazards for human or environment. Results of PBT and vPvB assessment: Based on available data, the product does not contain any PBT or vPvB substances. Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.		

SECTION 3. Co	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)		
64-17-5/ 200-578-6/ 603-002-00-5	01-2119457610-43- 0147	10 – 20 %	ethanol	Flam. Liq. 2; H225		

SECT	SECTION 4. First aid measures				
4.1	Description of first aid measur	res			
	General notes:	If the suggested first aid measures do not prove sufficient, seek medical attention.			
	Following inhalation:	Take the victim into fresh air, loosen his clothes and place him in a comfortable position. If breathing difficulty occurs, administer artificial respiration. In case of complaints call a physician.			
	Following skin contact:	Remove the contaminated clothes. Wash the skin surface under plenty of running water. Seek medical assistance if the symptoms of irritation remain.			



Page 3 of 17

Trading name:	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT				
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2

	Following eye contact:	In case of contact with eyes flush with water holding eyelids apart and moving the eyeballs (for at least 10 minutes). If the symptoms remain, immediately call in ophthalmologist.	
	Following ingestion:	Place the victim in a comfortable position. Rinse the mouth with clean water. If the victim is conscious induce vomiting. Do not give the victim anything orally, and do not induce vomiting if the victim is unconscious or suffers from convulsions.	
	Self-protection of the first aider:	-	
4.2	Most important symptoms and ef	fects, both acute and delayed	
	Following inhalation:	Inhalation of larger quantities may affect the central nervous system.	
	Following skin contact:	Prolonged or repeated dermal contact may cause the defatting and dryness of the skin.	
	Following eye contact:	May irritate the eyes.	
	Following ingestion:	Ingestion of larger quantities may affect the central nervous system.	
4.3	Indication of any immediate medi	cal attention and special treatment needed	
	If larger quantities have entered the body, obtain medical treatment (gastric lavage, activated carbon).		

SECTI	ON 5. Firefighting measures	
5.1	Extinguishing media	
	Suitable extinguishing media:	Extinguishing powder, alcohol-resistant foam, water, carbon-dioxide.
	Unsuitable extinguishing media:	Water with full jet.
5.2	Special hazards arising from the su	ubstance or mixture
	Hazardous combustion products:	Highly flammable liquid and vapour. In case of fire, smoke, and other combustion products (carbon monoxide, carbon dioxide) may be formed, the inhalation of such combustion products can have serious adverse effects on health. Vapours may form an explosive mix with air. Vapours may be ignited by open flames, sparks, electrical equipment, or static charge. Vapours may travel to great distances, ignite in contact with ignition sources and flash back to the primer source (container). Vapours of ethyl alcohol mix greatly with air and may form an explosive mixture. Air containing 3.3 – 19 % ethyl alcohol vapours may explode in contact with ignition sources. Diluting the mixture with large amounts of water results in the loss of its flammability (around 10 % concentration of ethyl alcohol).
5.3	Advice for firefighters	
	Wear full protective clothing and self-contained breathing apparatus. Cool the fire affected containers wi water spray. Use water spray to dissipate alcohol vapours.	
5.4	Additional information	
	-	



Page 4 of 17

Trading name:	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT				
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2

SECTIO	ON 6. Accidental release meas	ures		
6.1	Personal precautions, protecti	ve 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.		
	Emergency procedures:	Mark the area using proper signs.		
6.1.2.	For emergency responders:			
	Avoid contact with skin, eyes and clothing and inhaling gases, vapours and aerosols. Ensure adequate ventilation. Vapours may accumulate at floor level in low and confined spaces. Remove all heat, ignition and spark sources, turn off machines. Ignition spark arrestor must not be operated in the danger area. Use spark-proof tools. Be aware of the risk of slipping.			
6.2	Environmental precautions:			
	Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.			
6.3	Methods and material for con	tainment and cleaning up		
6.3.1.	Bunding, covering of drains; capping procedures:	Sand protective barrier or barriers made of similar materials.		
6.3.2.	Cleaning up:	Collect the spilled product with inert, non-combustible absorbent (e.g. sand, vermiculite, earth) then place into a suitable, closed, properly labelled chemical waste container for removal/disposal. During the collection, placement, disposal of the waste, wear appropriate individual protective equipment. Flush the remains with plenty of water. The product loses its flammability, if diluted with significant amount of water (approx. 10% solution).		
6.3.3.	Other information:	Secure proper ventilation. Do not use incompatible materials (see Section 10).		
6.4	Reference to other sections			
	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.			

SECTIO	SECTION 7. Handling and storage				
7.1	Precautions for safe handling				
7.1.1.	Protection measures				



Page 5 of 17

Trading name:	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT				
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2

	Measures to prevent fire:		Use in well ventilated storage rooms. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use non-sparkling tools and equipment.			
	Measures to prevent aerosol and dust generatio	n:	Ensure adequate ventilation.			
	Measures to protect the environment:		Prevent spilling into the sewage system and waterways.			
	Other measures:		Protect against electrostatic charges.			
7.1.2.	Advice on general occupational hygiene:					
	Do not eat, drink or smoke in the workspace. Th	oroughly was	sh hands after work and before eating.			
7.2	Conditions for safe storage, including any incompatibilities					
	Technical measures and storage conditions:	Store in a well-ventilated place, protected from sunligh away from sources of heat and ignition, in its original unopened and hermetically sealed packaging, awa from oxidizing agents, food, feed and articles of consumption.				
	Packaging materials:	Manufactu	urer's original packaging.			
	Requirements for storage rooms and vessels:	Keep away	y from food and drink. Keep the containers sed.			
	Advices for storage equipment:	be resista	ge must be made of hard material; floors must nt to chemicals. There must be no drain that eads into sewage system. Secure proper n.			
	Further information on storage conditions:	Do not place the unused material in the storage roc and do not use empty containers for storing oth chemicals. Do not store with incompatible materials (s Section 10).				
7.3	Specific end use(s)					
	Recommendations:	-				
	Industrial sector specific solutions:	-				

SECTION 8. Exposure controls/personal protection						
8.1 Control parameters						
Substance	CAS No	· ·	exposure limit t term values	Biological limit values		
		ppm	mg/m³	-		
Ethanol	64-17-5	1000/-	1900/-	-		
			·			
Substance name: -						



										Page 6 of 17	
Trading nam	ne:			GRAI	M CRYST	AL VIC	LET	, PHENOL FRE	E REAGE	NT	
Product code	e: G	GCF-OT	-X**		Revisio	on date	:	23 Dec 2022	2	Version:	2
			1								
EC No:		-	CAS No):	-						
DNEL											
					In	dustrial					
Route of		Acı			Acute			Chronic		Chronic	
exposure:		effect	local	effe	ct systemi	С	6	effect local		effect systemic	
Oral	-	000	, 3	-		-			-		
Inhalation		900 mg ethanol)		-		-			380 m	g/m³ (ethanol)	
Dermal	-			-		-			343 m	g/kg (ethanol)	
Critical physic	al paran	neters: s	solubility,	flamm	ability, coı	rrosivity		-			
				_	Co	nsume	•				
Route of		Ad	cute		Acute			Chronic		Chronic	
exposure:		effec	t local	effe	ct systemi	С	6	effect local		effect systemic	
Oral		-		-		-			87 mg	/kg bw/day (eth	anol)
Inhalation		950 m (ethan	_	-		-			114 m	ig/m³ (ethanol)	
Dermal		-		-		-			206 m	g/kg (ethanol)	
PNEC											
Environmenta	l protec	tion tar	get			PNEC					
Fresh water						0.96 m	g/l (ethanol)			
Freshwater se	diments					3.6 mg	/kg	(ethanol)			
Marine water						0.79 mg/l (ethanol)					
Marine sedim	ents					2.9 mg/kg (ethanol)					
Food chain						380-720 mg/kg (ethanol)					
Microorganisr	ms in se	wage tr	eatment			580 mg/l (ethanol)					
Soil (agricultu	ral)					0.63 mg/kg (ethanol)					
Air						no information available					
8.2 E	xposure	contro	ls								
8.2.1. A	Appropri	ate eng	ineering	contro	s						
			ıre relateo e during			concer concer existin	ntrati ntrati g sc	f a hazardous ion limit it is tl ion levels down ientific and tech substance poses	ne emplo to a min nnologica	oyer's duty to k imum achievabl I means, where	keep e by

In accordance with Section 7.

Structural measures to prevent

exposure:



Page 7 of 17

Trading name:	GRAM	Т			
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2

	Organisational measures to preve exposure:	nt	Organization of work in order to reduce other worker's influence during work process.		
	Technical measures to prevent ex	oosure:	In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin. Use according to general application methods and with adequate ventilation.		
			Use non-sparkling ventilation system.		
			Provide appropriate personal protective equipment, safety shower and eye-wash station.		
8.2.2.	Personal protection equipment				
8.2.2.1.	Eye and face protection:	Use appropriate, chemical-proof protective glasses/face shield (EN ISO 16321-1:2022, EN 166).			
8.2.2.2.	Skin protection				
	Hand protection:	Use appropriate, chemical-resistant protective gloves (EN 374).			
	Other skin protection:	Use ap	propriate protective clothing.		
8.2.2.3.	Respiratory protection:	concer in the contac	e of normal usage and ventilation, it is not necessary. If attration of ethyl alcohol exceeds occupational exposure limits air, use a self-contained breathing apparatus. For short and if the oxygen content of the air is greater than 18 %, use ective gas mask with filter A (EN 14837/A1).		
8.2.2.4.	Thermal hazards:	No the	rmal hazards known.		
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		

SECT	SECTION 9. Physical and chemical properties						
9.1	Information on basic physical and chemical properties						
		Value	Method				
	Physical state:	liquid	No information available				
	Colour:	purple	No information available				
	Odour/odour threshold:	ethanol like/no information available	No information available				
	Melting point / freezing point:	No information available	No information available				



Page 8 of 17

Trading name:	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT				
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2

	-		
9.2	Other information		
	Particle characteristics:	No information available	No information available
	Relative vapour density:	No information available	No information available
	Density and/or relative density:	No information available	No information available
	Vapour pressure:	No information available	No information available
	Partition coefficient n- octanol/water (log value):	No information available	No information available
	Solubility:	No information available	No information available
	Kinematic viscosity:	No information available	No information available
	pH:	No information available	No information available
	Decomposition temperature:	No information available	No information available
	Auto-ignition temperature:	No information available	No information available
	Flash point:	49 °C	No information available
	Lover and upper explosion limit:	No information available	No information available
	Flammability:	No information available	No information available
	Boiling point or initial boiling point and boiling range:	No information available	No information available

SECTI	ON 10. Stability and reactivity				
10.1	Reactivity:	See Section 10.5.			
10.2	Chemical stability:	Stable within normal temperature and general work conditions.			
10.3	Possibility of hazardous reactions:	ssibility of hazardous reactions: See Section 10.5.			
10.4	Conditions to avoid:	Keep away from heat, sparks, open flames, strong heating and ignition sources. No smoking.			
10.5	Incompatible materials:	Strong oxidizing agents (inorganic strong acid, nitric acid, perchlorates, peroxy compounds, perchloric acid, permanganates etc.), alkali metals, alkali earth metals.			
10.6	Hazardous decomposition products:	Carbon monoxide and carbon dioxide.			

SECTION 11. Toxicological information							
11.1 Informa	Information on hazard classes as defined in Regulation (EC) No 1272/2008						
Acute t	Acute toxicity:						
Route of exposure:	Method	Species	Dose LD ₅₀ /LC ₅₀ or ATE _{mix}	Exposure time	Results		
Oral:	-	rat (ethanol)	LD ₅₀	-	7.060 mg/kg		
Dermal:	-	rabbit (ethanol)	LD ₅₀	_	>20.000 mg/l		



Page 9 of 17

Trading name:			GRAM CR	YSTAL	. VIOLE	, PHENOL	FREE REAG	ENT		
Product code:	G	CF-OT-X**	Re	evision	date:	23 Dec	2022	Versi	on:	2
Inhalation:		-	rat (ethanol)		LC ₅₀		4 h		>8.000 n	ng/l
Specific	targe	t organ toxicit	y – single exp	osure (S	STOT SE):					
		Spec	ific effects			Target org	an	Note		
Oral:	N	lo information	available		No info	rmation ava	ailable	-		
Dermal:	N	lo information	available		No info	rmation ava	ailable	-		
Inhalation:	N	lo information	available		No info	rmation ava	ailable	-		
Aspiratio	on ha	zard:	١	lo infor	mation a	vailable.				
Irritation	and	corrosion								
		Exposur	e time	Spec	ies	Evaluation	Method		Note	
Skin			_				_	_		
corrosion/irritation	n:	_						_		
Serious eye		-	_			_	-	_		
damage/irritatior	1									
Sensitiza	ation									
Skin sensitization		No inf	ormation avai	lable.						
Respiratory sensi			ormation avai							
1 2										
Sympton	ms rel	lated to the ph	nysical, chemic	al and t	toxicolog	ical characte	eristics			
, - , , , , , ,		Absorption	of great o					nkenness,	eupho	oria,
Oral exposure:			ness and alcoh				5 5	'		and
		vomiting ma	y occur. Repea	ated or	prolonge	ed exposure	may lead to	liver cirrho	osis.	
Dermal exposure	:	After prolon cracking of s	ged or repea kin.	ited exp	posure s	ymptoms n	nay include:	defatting,	dryness	and
Inhalation exposu	ıre:	Inhalation of membranes.	great quantiti	es may (cause diz	ziness, euph	oria and mild	irritation o	of the mu	ucous
Evo ovposuro:			ritation and re	dnocc						
Eye exposure:		iviay cause ii	intation and re	uness.						
Repeate	d dos	se toxicity (sub	acute, subchr	onic, ch	ronic)					
		Dose	Exposure time	Speci	es	Method	Evaluat	ion	Note	
Subacute oral	No avai	information lable	No information available	No inforr availa	mation Ible	No informatio available	on No info	ormation le	_	



Page 10 of 17

Trading name:	GRAM	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT							
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2				

Subacute dermal	No i availa	information able	No information available	No information available	No information available	No inform available	nation	-
Subacute inhalation	No i availa	information able	No information available	No information available	No information available	No inform available	nation	-
Subchronic oral	No i availa	information able	No information available	No information available	No information available	No inform available	nation	_
Subchronic dermal	No i availa	information able	No information available	No information available	No information available	No inform available	o information vailable	
Subchronic inhalation	No i availa	information able	No information available	No information available	No information available	No inform available	No information available	
Chronic oral	No i availa	information able	No information available	No information available	No information available	No information available		-
Chronic dermal	No i availa	information able	No information available	No information available	No information available	No information available		_
Chronic inhalation	No i availa	information able	No information available	No information available	No information available	No inform available	nation	-
Specific	target	organ tovicit	v – repeated e	xposure (STOT	DE).			
Specific	target	organ toxicit		•		rgan		Note
Specific effects				Target organ No information available -			NOLE	
Subacute oral		No informa	tion available				-	Note
	 		<u> </u>			n available	-	Note
Subacute derma		No informa	tion available		No information	n available n available		Note
Subacute oral Subacute derma Subacute inhalat Subchronic oral		No informa	tion available		No information	n available n available n available	-	Note
Subacute derma Subacute inhalat Subchronic oral	tion	No informa No informa No informa	tion available tion available tion available		No information No information	n available n available n available n available	-	Note
Subacute derma Subacute inhalat Subchronic oral Subchronic dern	tion	No informa No informa No informa No informa	tion available tion available tion available tion available		No information No information No information No information	n available n available n available n available n available	-	Note
Subacute derma Subacute inhalat Subchronic oral Subchronic dern Subchronic inha Chronic oral	tion	No informa No informa No informa No informa No informa No informa	tion available tion available tion available tion available tion available tion available		No information	n available n available n available n available n available n available	-	Note
Subacute derma Subacute inhalat Subchronic oral Subchronic dern Subchronic inha	nal lation	No informa	tion available tion available tion available tion available tion available		No information No information No information No information No information No information	n available n available n available n available n available n available n available	-	Note



Page 11 of 17

Trading name:	GRAM	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT							
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2				

	Mutagenicity in vitro:	Bas	sed on available data, the classification criteria are not met.					
	Genotoxicity:	Based on available data, the classification criteria are not met.						
	Mutagenicity in vivo:	Bas	sed on available data, the classification criteria are not met.					
	Germ cell mutagenicity:	Bas	sed on available data, the classification criteria are not met.					
	Reproductive toxicity:	Bas	sed on available data, the classification criteria are not met.					
	Summary of evaluation of the CN properties:	EMR Based on available data, the classification criteria are no met.						
11.2	Information on other hazards:							
11.2.1.	Endocrine disrupting properties:							
	Based on available data, does not conta endocrine disruptors.	ain						
11.2.2.	Other informations:							
	-							

SECTION 12. Ecologi	cal informat	ion				
12.1 Toxicity						
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	golden orf	No information available	8.140 mg/l /48 h (ethanol)	-
Crustacea:	EC ₅₀	48 hours	daphnia magna	No information available	7.800 mg/l (ethanol)	-
Algae/aquatic plants	IC ₅₀	4 days	algae	No information available	5.000 mg/l / 7d (ethanol)	-
Other organisms	-	-	-	_	-	-
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-



available

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

Page 12 of 17

Trading name	:		GRAI	МС	RYSTAL VIOLE	Τ, Ι	PHENOL FR	EE REA	AGENT		
Product code	: 0	SCF-OT-X**		l	Revision date:		23 Dec 202	22	Vers	ion:	2
Algae/aquatic p	olants	IC ₅₀	72 hours	No information available		intormation		No information available		-	
Other organism	าร	-	-		_	_				-	
12.2 Persist	ence a	nd degradab	oility								
		adation									
<u> </u>		egradation ha	alf-lives		Method	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Evaluation	า	N	lote	
Marine water	No ii	No information available			o information ailable		lo informatior vailable	1	-		
Fresh water	ter No information available				No information No information available			1	-		
Air	I No intormation available				o information ailable		lo informatior vailable	1	-		
Soil	No information available						lo informatior vailable	1	_		
Biode	gradati	on									
% Degradati		Time (c	lays)		Method		Evaluation	າ	N	lote	
No information available	1	No intavailable	formation		o information railable	No information available)	No information available		
12.3 Bioacc	umula	tive potentia									
Octan	ol-wate	er partition c	oefficient (log	Kow)		·		:		
Value	Con	centration	рН	°C	Method		Evalua	ation		Note	
_	-			-	-		-		-		
Biocor	ncentra	tion factor (E	BCF)								
Value		Specie	es		Method		Evaluatio	on	1	Vote	
	N	lo inf	ormation	No	o information	No information					

available

available



Page 13 of 17

Trading name:	GRAM	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT							
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2				

	Chroni	c ecoto	xicity							
	Value		Dose	Exposure time	Spe	ecies	Metho	od E	valuation	Note
Chroni	c toxicity	on fish	LC ₅₀	No No information available available		mation	No information available		ormation ailable	-
	Chronic toxicity on rustacea (<i>Daphnia</i>)		EC ₅₀	No information available	No inforr availa	mation	No informa available	1	ormation ailable	-
12.4	Mobilit	y in soi	il							
12.4			dicted distributi	on in onvironm	ontal c	ompartm	onts:			
		······································	n available	OII III EIIVII OIIIII	endi C	.omparut	iciils.			
	Surface									
	Val		°C	Concentra	Concentration		Method		Note	
	No No information available available		No information available				<u> </u>	_	NOTE	
	Adsorp	+ion / a	Vaccoration							
	Adsorp		desorption D coefficient							
Transp	ort	1	ry's constant	log Kow	Ev	Evaporation rate		Method		Note
Soil-wa	ater	No availa	information able	No informatio available		n No information available		No information available		-
Water-	air	No availa	information able	No information		o informa ailable	ition	No inforr available	nation	-
Soil-air	•	No availa	information able	No information available		o informa ailable	ition	No inforr available	nation	-
12.5	Results	of PBT	and vPvB asses	ssment						
			lable data, the p		t cont	ain any P	BT or vP	vB substa	nces.	
12.6.	Endocr	ine disi	rupting properti	es						
	Pacod .	an avai	lable data dees	not contain en	docrin	a disrunt	orc			



Page 14 of 17

Trading name:	G	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT								
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2					

12.7.	Other adverse effects							
12.7.		to residues reach source quetors westerning and as !!						
	Do not let the product or i	ts residues reach sewer system, waterways and soil.						
SECTIO	N 13. Disposal considerat	ions						
13.1	Waste treatment method							
13.1	waste treatment method	us						
13.1.1.	Product/Packaging dispo	osal:						
	Submit for disposal to the Protection.	ne legal person authorized by the Ministry of Environmental and Nature						
13.1.2.	Waste codes/waste desi	gnations according to Law:						
	Packaging that contains	residual hazardous substances or is contaminated with hazardous substances						
13.1.3.	Waste treatment – releva	ant information:						
	No information available							
13.1.4.	Sewage disposal – releva	ant information:						
	Waste must not be dispo	osed of into the sewage system.						
13.1.5.	Other disposal recomme							
	authorized by the minist	roduct's remains into the sewage system. Submit the remains to the collectors try in charge. Do not dispose of the packaging into the sewage system. Submit llectors authorized by the ministry in charge. Unused product residues may be						
13.1.6.	Relevant Community pro	ovisions:						
	Disposal must be made	according to official regulations.						
SECTIO	N 14 TRANSPORT INFORI Transporting/shipment by							
UN num		1170						
	per shipping name:	Ethanol solution						
	rt hazard class(es):	3						
Packing								
	nentally hazardous:							
	precautions for user:	-						
	Transporting/shipment by	rail (RID)						
UN num	ber:	1170						



SAFETY DATA SHEET

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

Page 15 of 17

Trading name:	GRAM	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT							
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2				

UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-
Inland waterway transport (ADN)
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-
Transporting/shipment by sea (II	MDG)
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	III
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:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-

SECTI	CTION 15. Regulatory information						
15.1	Safety, health and env	Safety, health and environmental regulations/legislation specific for the substance or mixture					
	EU regulations						
	Authorization and/or restrictions of use						
	Authorizations:	-					



Page 16 of 17

Trading name:	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT				
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2

	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; COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
		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	nt
	None	

SECTION 16. Other information	
16.1 Indication of changes:	-



Page 17 of 17

Trading name:	GRAM CRYSTAL VIOLET, PHENOL FREE REAGENT				
Product code:	GCF-OT-X**	Revision date:	23 Dec 2022	Version:	2

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)
Classific	cation	Classification procedure
_		-
16.5.	Relevant H statements (num	ber and full text)
	H: 225	Highly flammable liquid and vapor.
	226	Flammable liquid and vapor.
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 result	ing to chemical safety assessment
-	



Page 1 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION					
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2		

SECTI	ON 1: Identification of	the substance	e/mixture	and of the company/undertaking	
1.1.	Product identifier				
	Trading name:	GRAM SOD	GRAM SODIUM HYDROGENCARBONATE, SOLUTION		
	Chemical name:	-	-		
	Catalogue number:	GNHK-OT-)	(**		
1.2.	Relevant identified us	es of the subs	tance or mi	xture and uses advised against	
	Uses:		For use w	ith BioGram ECO kit.	
	Uses advised against:		Only the i	identified uses are advised.	
	Reason why uses advised against: medical			oduct is intended for use only as an <i>in vitro</i> diagnostic al device, registered at the Agency for Medicinal Products and al Devices and there is no reason to use it for other purposes	
1.3.	Details of the supplier of the safety data sheet				
	Supplier: Bi		oGnost Ltd		
	Address: N		edjugorska	59, Zagreb	
	Telephone number: +		-385 1 2409997		
	Fax no.: +		+385 1 2404039		
	e-mail of competent person: <u>m</u>		msds@biognost.hr		
	National contact:	_			
1.4.	Emergency telephone	number			
	National Protection a	nd Rescue Dire	ectorate:	112	
	Medical information:			+385 1 2348 342	
	Other information:			-	

SECTIO	N 2. Hazards identification				
2.1.	Classification of the substance or mixture				
2.1.1.	Classification according to Regula	ation (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 Section 16			
2.2.	Label elements				
	Product identification:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION			
	Identification number: -				
	Authorization no.:	-			
	Hazard pictograms:	-			



Page 2 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION						
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2			

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

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)
144-55-8/ 205-633-8/ -	-	< 10%	sodium hydrogen carbonate	not classified

SECTIO	ON 4. First aid measures			
4.1.	Description of first aid measu	res		
	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 aid	er: Treat symptomatically.		
4.2.	Most important symptoms an	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.		



Page 3 of 16

Trading name:	GRA	M SODIUM HYDROGE	NCARBONATE, SOLUTI	ON
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2

	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	
	-	

SECTIO	CTION 5. Firefighting measures			
5.1.	Extinguishing media			
	Suitable extinguishing media: Small fire - water spray, dry powder, CO ₂ 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	SECTION 6. Accidental release measures				
6.1.	Personal precautions, protective equipment and emergency procedures				
6.1.1.	For non-emergency personnel				
	Protective equipment:	Use personal protective equipment (see Section 8).			
	Accident prevention methods	Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke.			
	Emergency procedures: Mark the area using proper signs.				
6.1.2.	For emergency responders:				
	Wear protective equipment (see Section 8).				
6.2.	Environmental precautions:				
	Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112.				
6.3.	Methods and material for containment and cleaning up				
6.3.1.	Bunding, covering of drains; capping procedures:	Sand or clay barriers.			



Page 4 of 16

Trading name:	GRA	M SODIUM HYDROGE	NCARBONATE, SOLU	TION
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2

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		
	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	ION 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.		hly wash hands after work and before eating.	
7.2.	Conditions for safe storage, including any incompatibilities		ilities	
	Technical measures and storage conditions:	venti	in tightly closed and upright set containers in a well lated storage rooms, and away from sources of heat, ght, and other incompatible substances.	
	Packaging materials:	Manı	ufacturer's original packaging.	
	Requirements for storage rooms and vessels:	The storage must be made of hard material; floor		
	Advices for storage equipment:			
	Further information on storage conditions:	and o	ot place the unused material in the storage room do not use empty containers for storing other nicals. Do not store with incompatible materials (see on 9).	
7.3.	Specific end use(s)			



Page 5 of 16

GKA	WI SODIOM HYDROGE	ENCARBONATE, SOLU	TION
(-OT-X**	Date of compilation:	14 November 2022	Version: 2

Recommendations:	-
Industrial sector specific solutions:	-

SECTION 8. Exposure controls/personal protection										
Substance		CAS No			Occupational exposure limit values/short term values			Bio	ological limit values	
0.00000					ppm	mg,	/m³		3	
-			-			-	-		No infor	mation available
					•					
Substance name:	-									
EC No:	-		CAS No:	-						
DNEL										
					Inc	dustrial				
Route of expo	cura.	ļ A	Acute		Acut	е		Chron	ic	Chronic
Noute of expe	Jaure.	effe	ect local	effe	ect sys	temic		effect lo	cal	effect systemic
Oral		-		-			-			-
Inhalation	Inhalation -			-			-			-
Dermal		-		-			-			-
Critical physic	al parar	meters: s	solubility, fla	mmabili	ty, cor	rosivity:	-			
		1			Co	nsumer	1			
Route of expo	sure.		Acute		Acut	e	Chronic			Chronic
·		effe	ect local	effe	effect systemic		effect local		cal	effect systemic
Oral		-		-		-			-	
Inhalation		-		-			-			-
Dermal		-		-			-			-
PNEC						ı				
Environmenta	l protec	ction tar	get			PNEC				
Fresh water					No information available					
Freshwater sediments				No information available						
Marine water					No information available					
Marine sedim	ents					No information available				
Food chain						No information available				
Microorganisi	ms in se	wage tr	eatment			No infor	mation	availabl	е	
Soil (agricultural)				No information available						



Page 6 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION					
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2		

Air			No information available			
8.2.	Exposure controls					
8.2.1.	Appropriate engineering controls					
	Substance/mixture relate measures to prevent expeduring 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 pr 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 prexposure:	event	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.			
8.2.2.	Personal protection equip	oment				
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					
			ective gloves must be according to the EU Directive 2016/425/EEC and dard EN 374.			
	Hand protection:		Glove material: nitrile rubber			
			Glove thickness: ≥0.50 mm Break through time: >480 min			
	Other skin protection:		r antistatic clothing made of natural fibers (such as cotton) with long es (EN 13034), and shoes that cover the entire foot (EN 10335).			
8.2.2.3.	Respiratory protection:	Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) acording to EN 14387) used when concentration levels exceed GVI.				
8.2.2.4.	Thermal hazards:	No inf	ormation available			
8.2.3.	Environmental exposure	controls				
	Substance/mixture relate measures to prevent expe		See Section 6			
	Structural measures to prexposure:	event	Use modern equipment.			
	Organisational measures prevent exposure:	to	Adapt the work process to the required working conditions of the workplace.			
	Technical measures to prexposure:	event	See Section 6			

SECTION 9. Physical and chemical properties



Page 7 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION					
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2		

	Value	Method
Physical state:	liquid	No information available
Color:	transparent	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
Flammability:	No information available	No information available
Lover 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

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



Page 8 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION					
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2		

Acute toxici	ty:						
Route of exposure:	Method	Method Species		e Dose C ₅₀ or Exposure		Results	
Oral exposure:	No information available	-	LD ₅₀	-		-	
Dermal exposure:	No information available	-	LD ₅₀	-		-	
Inhalation exposure:	No information available	-	LC ₅₀	_		-	
Specific targ	get organ toxicity – si	ngle exposure ((STOT SE):				
	Specif	ic effects	Target	organ		Note	
Oral exposure:	No information	available	No information	on available	-		
Dermal exposure:	No information	available	No information available				
Inhalation exposure:	No information	available	No information available -				
Aspiration h			rmation available				
	Exposure time	Species	Evaluation	Method		Note	
Skin irritation:	-	-	-				
Eye irritation:	-	-	-				
Sensitization	า						
Dermal exposure:	No information avail	able					
Inhalation exposure:	No information avail	able					
Symptoms r	related to the physica	ıl, chemical and	toxicological chara	cteristics			
Oral exposure:	_	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.					
Dermal exposure:	According to our have not been en	_	cal, physical and to	xicological pro	operties	of the substanc	
	According to our	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.					



Page 9 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION					
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2		

Eye exposure:	_	o our findings, en entirely test	•	ysical and tox	icological proper	ties of the substanc
Repeate	ed dose toxicity (sub	acute, subchro	onic, chronic)		
	Dose	Exposure time	Species	Method	Evaluatio	on Note
Subacute oral	No information available	No information available	No informatio available	No n informat available		_
Subacute dermal	No information available	No information available	No informatio available	No n informat available		
Subacute inhalation	No information available	No information available	No informatio available	No informat available		
Subchronic oral	No information available	No information available	No informatio available	No n informat available		
Subchronic dermal	No information available	No information available	No informatio available	No n informat available		
Subchronic inhalation			No informatio available	No informat available		
Chronic oral	No information available	No information available	No informatio available	No informat available		
Chronic dermal	No information available	No information available	No informatio available	No n informat available		
Chronic inhalation			No informatio available	No n informat available		
Specific	target organ toxicit	· ·	exposure (ST	<u> </u>		NI-+-
Subacute oral		specific effects ation available		Target organ		Note -
Subacute dermal		ation available		No information available No information available		-
Subacute inhalat		ation available				
Subchronic oral		ation available		No informatio		-



Page 10 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION				
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2	

Subchro	chronic dermal No information		on available	No information available	-			
Subchronic inhalation No information		on available	No information available	-				
Chronic	oral	No informati	on available	No information available	-			
Chronic	dermal	No informati	on available	No information available	-			
Chronic	inhalation	No informati	on available	No information available	-			
	CMR effects (c	arcinogenicity;	mutagenicity; repro	ductive toxicity)				
	Carcinogenicit	y:	Current studies	Current studies on test animals did not indicate carcinogenic effects.				
	Mutagenicity in-vitro:		Current in vitro tests did not indicate mutagenic effects.					
	Genotoxicity:		No information a	No information available				
	Mutagenicity i	n-vivo:	Current in vivo	Current in vivo tests did not indicate mutagenic effects.				
	Germ cell muta	agenicity:	No information a	No information available				
	Reproductive t	oxicity:	No toxicity on reproductive organs was determined in reproductive organs.					
	Summary of ev	aluation of the	e CMR properties:	-				
11.2.	Information or	n other hazards	:					
11.2.1.	Endocrine disr	upting propert	ies:					
	No known end	locrine disrupti	ng properties that a	ffect human health.				
11.2.2.	Other informat	tions:						

SECTION	12. I	Ecologica	I information
----------------	-------	------------------	---------------

12.1. Toxicity

Acute toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	-	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	-	-
Algae/aquatic plants	IC ₅₀	8 days	No information available	No information available	_	-
Microorganisms	LC ₅₀	72 hours	-	-	-	-
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note



Page 11 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION							
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version:	2			

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

12.2. Persistence and degradability

Abiotic degradation

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

Biod	eai	rad	lati	n

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

12.3. Bioaccumulative potential

Octanol-water partition coefficient (log Kow)

Value	Concentration	рН	°C	Method	Evaluation	Note
-	No information available	-	-	No information available	No information available	-

	, ,			
Value	Species	Method	Evaluation	Note



No information available

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

Trading na	ame:		SRAM	SODIU	M HYI	DROGE	NCAR	BONAT	E, SOL	UTION	
Product co	ode: 0	SNHK-OT-X**	** Date of comp		compila	ation:	14 No	vembe	r 2022	Ver	sion: 2
No informa available		lo inforn vailable	information No information available					No information available		No information available	
Ch	nronic ecot	oxicity									
V	/alue	Dose		osure ime	Spe	ecies	Met	hod	Eva	aluation	Note
Chronic tox	xicity on fis	h LC ₅₀	No infor	mation able	No inforn availa	mation ible	No inform availab		No inforr availa	mation Ible	-
Chronic tox crustacea (<i>I</i>	-	EC ₅₀	No infor availa	mation able	No inforn availa	No mation information able available					-
	obility in so	oil edicted distribut	ion in e	environm	nental c	compart	ments:				
Kn No	nown or pre o informati	edicted distribut on available	ion in e	environm	nental c	compart	ments:				
Kn No	nown or pro o informati urface tensi	edicted distribut on available on:				compart		nd.			lote
Kn No Su No int	nown or pro o informati urface tensi Value	edicted distribut on available	Co	environm oncentra informa iilable	ition		Metho			N	lote
Kn No Su No int	nown or pro o informati urface tensi Value o formation	edicted distribut on available on: °C No information	Co	oncentra informa	ition	No inf	Metho		-		lote
No Su No int av	nown or pro o informati urface tensi Value o formation vailable	edicted distribut on available on: °C No information available	Co	oncentra informa	ition	No inf	Metho		-	N	lote
No Su No int av	o informati orface tensi Value o formation vailable	edicted distribut on available on: °C No information	No ava	oncentra informa	tion	No inf	Metho ormation ole	n	- lethod	N	Note
No Su No inflav Ac	o informati orface tensi Value o formation vailable	edicted distribution available on: C No information available desorption coefficient y's constant information	No ava	oncentra informa iilable og Kow	tion tion Ev	No inf availab	Metho formation ole on rate	n N	1ethod		
No Su No int av	o informati urface tensi Value o formation vailable dsorption / Henr	edicted distribution available on: C No information available desorption coefficient y's constant information e information	No availa	oncentra informa nilable og Kow nformation	Evon No	No inf availab vaporatio	Metho ormation on rate	No intavaila	1ethod formation	on _	



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

amended by Regulation (EU) No. 2020/878

Page 13 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION							
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2				

12.6.	Endocrine disrupting properties				
	No known endocrine disrupting prop	erties that affect the environment.			
12.7.	Other adverse effects				
	No adverse effects are expected.				
SECTIO	ON 13. Disposal considerations				
13.1.	Waste treatment methods				
13.1.1.	Product/Packaging disposal:				
	Submit for disposal to the legal per Protection.	son authorized by the Ministry of Environmental and Nature			
13.1.2.	Waste codes/waste designations ac	cording to Law:			
	No information available				
13.1.3.	Waste treatment – relevant informa	tion:			
	No information available				
13.1.4.	Sewage disposal – relevant informa	tion:			
	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:				
	-				
SECTIO	N 14. Transport information				
	Transporting/shipment by road (ADR				
UN num	mber: No	t subject to transport regulations.			
UN prop	per shipping name: -				
Transpo	Transport hazard class(es): -				



Trading name:

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

GRAM SODIUM HYDROGENCARBONATE, SOLUTION

Page 14 of 16

Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version:	2
Packing group:		-			
Environmentally hazardous:		-			
Special precautions for	or user:	-			
Transporting	g/shipment by rail (RID)			
UN number:	JN number: Not subject to transport regulations.				
UN proper shipping r	name:	-			
Transport hazard clas	s(es):	-			
Packing group:		-			
Environmentally haza	rdous:	-			
Special precautions for	or user:	-			
Inland water	way transport (ADI	N)			
UN number:		Not subject to transport	regulations.		
UN proper shipping r	name:	-			
Transport hazard clas	s(es):	-			
Packing group:		-			
Environmentally haza	rdous:	-			
Special precautions for	or user:	-			
Transporting	g/shipment by sea ((IMDG)			
UN number:		Not subject to transport	regulations.		
UN proper shipping r	name:	-			
Transport hazard clas	s(es):	-			
Packing group:		-			
Environmentally haza	rdous:	-			
Special precautions for	or user:	-			
Transporting	g/shipment by air (I	CAO-TI/IATA-DGR)			
UN number:		Not subject to transport	regulations.		
UN proper shipping r	name:	-			
Transport hazard clas	s(es):	-			
Packing group:		-			
Environmentally haza	rdous:	-			
Special precautions for	or user:	-			



Page 15 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION						
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 2			

15.1.	Safety, health and environ	mental 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 199 guideline)	9/13/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 assessmen	nt					
	None						

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



Page 16 of 16

Trading name:	GRAM SODIUM HYDROGENCARBONATE, SOLUTION					
Product code:	GNHK-OT-X**	Date of compilation:	14 November 2022	Version: 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	
Key literature references and source of data:	-	
Classification and procedure 1272/2008 (CLP)	used to derive the classification for mixture according to Regulation (EC)	
cation	Classification procedure	
	-	
Relevant H statements (numb	er and full text)	
H: -	-	
Training advice:	-	
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.	
	source of data: Classification and procedure of 1272/2008 (CLP) cation Relevant H statements (numbous) H: - Training advice: Further information:	

ANNEX: Exposure scenario resulting to Chemical safety assessment	



Page 1 of 16

Trading name:	GRAM LUGOL SOLUTION, STABILIZED					
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5		

SECTION	ON 1: Identification of	the substance	e/mixture a	and of the company/undertaking
1.1.	Product identifier			
	Trading name:	GRAM LUC	OL SOLUTIO	DN, STABILIZED
	Chemical name:	-		
	Catalogue number:	GLS-OT-X*	**	
1.2.	Relevant identified us	es of the sub	stance or mi	xture and uses advised against
	Uses:		Solution f	or use in BioGram 4 Gram bacteria staining kit.
	Uses advised against:		Only the i	dentified uses are advised.
	Reason why uses adv	ised against:	uct is intended for use only as an <i>in vitro</i> diagnostic evice, registered at the Agency for Medicinal Products and evices and there is no reason to use it for other purposes	
1.3.	Details of the supplie	r of the safety	data sheet	
	Supplier: B		BioGnost Ltd.	
	Address:		/ledjugorska	59, Zagreb
	Telephone number: +		+385 1 2409997	
	Fax no.: +		+385 1 2404039	
	e-mail of competent	person: <u>n</u>	msds@biognost.hr	
	National contact:	-		
1.4.	Emergency telephone	number		
	National Protection a	nd Rescue Dii	rectorate:	112
	Medical information:			+385 1 2348 342
	Other information:	Other information:		-

SECTIO	SECTION 2. Hazards identification					
2.1.	Classification of the substance or mixture					
2.1.1.	Classification according to Regula	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 Section 16				
2.2.	Label elements					
	Product identification:	GRAM LUGOL SOLUTION, STABILIZED				
	Identification number: -					
	Authorization no.:	-				
	Hazard pictograms:	-				



Page 2 of 16

Trading name:				
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5

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

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: Following skin contact: Following eye contact: Following ingestion: Self-protection of the first aider:		-				
			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.				
			Remove contaminated clothing. Immediately wash with plenty of water and soap. Seek medical assistance if the symptoms of irritation remain. Rinse out with plenty of water with the eyelid held wide open using clean fingers. If the symptoms remain, immediately call a physician.				
			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.				
			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. According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.					
	Following eye contact:						



Page 3 of 16

Trading name:	GRAM LUGOL SOLUTION, STABILIZED					
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5		

	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		
	-		

SECTIO	SECTION 5. Firefighting measures						
5.1.	Extinguishing media						
	Suitable extinguishing media: Small fire - water spray, dry powder, CO ₂ 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	SECTION 6. Accidental release measures						
6.1.	Personal precautions, protective equipment and emergency procedures						
6.1.1.	For non-emergency personnel						
	Protective equipment:	Use personal protective equipment (see Section 8).					
	Accident prevention methods	Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke.					
	Emergency procedures:	Mark the area using proper signs.					
6.1.2.	For emergency responders:						
	Wear protective equipment (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 con	tainment and cleaning up					
6.3.1.	Bunding, covering of drains; capping procedures:	Sand or clay barriers.					



Page 4 of 16

Trading name:	GRAM LUGOL SOLUTION, STABILIZED					
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5		

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				
	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:		eep away from sources of heat and ignition. Do ot smoke.			
	Measures to prevent aerosol and dust generati	on: S	ecure 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:	ventila	n tightly closed and upright set containers in a well ted storage rooms, and away from sources of heat, nt, and other incompatible substances.			
	Packaging materials:	Manufacturer's original packaging.				
	Requirements for storage rooms and vessels:		away from food and drink. Keep the containers closed.			
	Advices for storage equipment:	be resi	orage must be made of hard material; floors must istant to chemicals. There must be no drain that y leads into sewage system. Secure proper tion.			
	Further information on storage conditions:	and do	t place the unused material in the storage room o not use empty containers for storing other cals. Do not store with incompatible materials (see n 9).			
7.3.	Specific end use(s)					



Page 5 of 16

	GRAM LUGOL SOL	UTION, STABILIZED	
LS-OT-X**	Date of compilation:	14 November 2022	Version: 5
_	S-OT-X**		S-OT-X** Date of compilation: 14 November 2022

Recommendations:	-
Industrial sector specific solutions:	-

SECTION 8. Exposure controls/personal protection											
8.1. Control parameters											
Substance					cupational exposure limit slues/short term values		Bio	Biological limit values			
						ppm	mg.	mg/m³			
-			-			-		-	No infor	mation available	
Substance name:											
EC No:	-		CAS No:	_							
DNEL											
					Inc	dustrial					
Route of expo	cura.	A	Acute		Acut	е		Chron	ic	Chronic	
Noute of expe	Jaule.	effe	ect local	effe	ect sys	temic		effect lo	cal	effect systemic	
Oral		-		-			-	-		-	
Inhalation		-		-		-		-			
Dermal		-		-			-			-	
Critical physic	al parar	neters: s	olubility, fla	mmabili	ty, cor	rosivity:	_				
		1			Co	nsumer					
Route of expo	sure:		Acute		Acut		Chronic			Chronic	
·		effe	ect local	effect systemic		temic	effect local		cal	effect systemic	
Oral		-		-					-		
Inhalation		-		-		-		-			
Dermal		-		-						-	
PNEC											
Environmenta	l protec	tion tar	get			PNEC					
Fresh water					No information available						
Freshwater sediments					No information available						
Marine water				No information available							
Marine sedim	ents					No information available					
Food chain						No information available					
Microorganisi	ms in se	wage tr	eatment			No information available					
Soil (agricultural)				No information available							



Page 6 of 16

Trading name:	GRAM LUGOL SOLUTION, STABILIZED						
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5			

Air			No information available			
8.2.	Exposure controls					
8.2.1.	Appropriate engineering	controls				
	Substance/mixture relate measures to prevent expeduring 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 preexposure:	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 pr exposure:	event	Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels.			
8.2.2.	Personal protection equipment					
8.2.2.1.	Eye and face protection:		Safety glasses that stick to face (preventing splashing) (EN 166) or visor.			
8.2.2.2.	Skin protection					
			ctive gloves must be according to the EU Directive 2016/425/EEC and lard EN 374.			
	Hand protection:		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	ctive full face mask (EN 136) or half mask (EN 140) equipped with a cor 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 relate measures to prevent expe		See Section 6			
	Structural measures to preexposure:	event	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			

SECTION 9. Physical and chemical properties



Page 7 of 16

Trading name:	GRAM LUGOL SOLUTION, STABILIZED					
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5		

Physical state: liquid No information available Color: yellow/amber No information available Color: yellow/amber No information available Modour/odour threshold: no odor/no information available Melting point / freezing point: No information available Boiling point or initial boiling point and boiling range: No information available Flammability: No information available No information available Lover and upper explosion limit: No information available Lover and upper explosion limit: 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): Vapour pressure: No information available No information available Density and/or relative density No information available Relative vapour density: No information available No information available Particle characteristics: No information available		Value	Method
Odour/odour threshold: Melting point / freezing point: No information available Flammability: No information available Lover and upper explosion limit: No information available Flash point: No information available No information available Auto-ignition temperature: No information available Decomposition temperature: No information available No information available Kinematic viscosity: No information available No information available	Physical state:	liquid	No information available
Melting point / freezing point: Melting point / freezing point: No information available	Color:	yellow/amber	No information available
Boiling point or initial boiling point and boiling range: Flammability: No information available Lover and upper explosion limit: No information available Flash point: No information available	Odour/odour threshold:	-	No information available
and boiling range: Flammability: Lover and upper explosion limit: No information available Flash point: No information available No information available Flash point: No information available	Melting point / freezing point:	No information available	No information available
Lover and upper explosion limit: No information available Flash point: No information available No information available Auto-ignition temperature: No information available Decomposition temperature: No information available No information available PH: No information available	J .	No information available	No information available
Flash point: No information available Auto-ignition temperature: No information available Decomposition temperature: No information available No information available PH: No information available	Flammability:	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 No information available Solubility: No information available No information available No information available Partition coefficient n-octanol/water (log value): No information available 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 No information available	Lover and upper explosion limit:	No information available	No information available
Decomposition temperature: No information available PH: No information available	Flash point:	No information available	No information available
pH: No information available No information available Kinematic viscosity: No information available Solubility: No information available Partition coefficient n-octanol/water (log value): Vapour pressure: No information available Density and/or relative density No information available	Auto-ignition temperature:	No information available	No information available
Kinematic viscosity: No information available Solubility: Partition coefficient n-octanol/water (log value): Vapour pressure: No information available	Decomposition temperature:	No information available	No information available
Solubility: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density Relative vapour density: No information available	рН:	No information available	No information available
Partition coefficient n-octanol/water (log value): Vapour pressure: No information available	Kinematic viscosity:	No information available	No information available
(log value):No information availableNo information availableVapour pressure:No information availableNo information availableDensity and/or relative densityNo information availableNo information availableRelative vapour density:No information availableNo information available	Solubility:	No information available	No information available
Density and/or relative density No information available Relative vapour density: No information available No information available	•	No information available	No information available
Relative vapour density: 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
Particle characteristics: No information available No information available	Relative vapour density:	No information available	No information available
	Particle characteristics:	No information available	No information available

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



Page 8 of 16

Trading name:		GRAM LUGOL SOLUTION, STABILIZED					
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5			

Acute toxici	ty:								
Route of exposure:	Method	Species	Effective Dose LD ₅₀ /LC ₅₀ or ATE _{mixture}	Exposure	time	Results			
Oral exposure:	No information available	-	LD ₅₀	-		-			
Dermal exposure:	No information available	-	LD ₅₀	_		-			
Inhalation exposure:	No information available	-	LC ₅₀	-		-			
Specific targ	get organ toxicity – si	ngle exposure ((STOT SE):						
	Specif	ic effects	Target	organ		Note			
Oral exposure:	No information	available	No information	on available	-				
Dermal exposure:	No information	available	No information	on available	-				
Inhalation exposure:	No information	available	No information	on available	-				
Aspiration h		THE HITE	rmation available						
	Exposure time	Species	Evaluation	Method		Note			
Skin irritation:	-	-	-						
Eye irritation:	-	-	-						
Sensitization	า								
Dermal exposure:	No information avail	able							
Inhalation exposure:	No information avail	able							
Symptoms r	related to the physica	ıl, chemical and	toxicological chara	cteristics					
Oral exposure:	•	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.							
Dermal exposure:	According to our have not been en	_	cal, physical and to	xicological pro	operties	of the substanc			
Inhalation exposure:	According to our	According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested.							



Page 9 of 16

Trading name:		GRAM LUGOL SOLUTION, STABILIZED					
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5			

Eye exposure:		o our findings, een entirely test	•	hysical	and toxicolog	ical propert	ies of the substance
Repeate	ed dose toxicity (su	bacute, subchro	onic, chronic	c)			
	Dose	Exposure time	Species		Method	Evaluation	n Note
Subacute oral	No information available	No information available	No informatio available	on	No information available	No information available	on -
Subacute dermal	No information available	No information available	No informatic available	on	No information available	No informatio available	on -
Subacute inhalation	No information available	No information available	No informatic available	on	No information available	No information available	on -
Subchronic oral	No information available	No information available	No informatic available	on	No information available	No information available	on -
Subchronic dermal	No information available	No information available	No informatio available	on	No information available	No information available	on -
Subchronic inhalation	No information available	No information available	No informatio available	on	No information available	No information available	on -
Chronic oral	No information available	No information available	No informatio available	on	No information available	No informatio available	on -
Chronic dermal	No information available	No information available	No informatio available	on	No information available	No information available	on -
Chronic inhalation	No information available	No information available	No informatio available	on	No information available	No information available	on -
Specific	target organ toxic		exposure (ST	OT RE			.
		Specific effects nation available		Target organ		Note	
Subacute oral Subacute dermal		nation available		No information available No information available		-	
Subacute dermai		nation available			formation avai		_
Subchronic oral		nation available			formation avai		_



Page 10 of 16

Trading name:		GRAM LUGOL SOL	UTION, STABILIZED	
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5

Subchro	onic dermal No information		n available	No information available	-			
Subchro	onic inhalation No information		n available	No information available	-			
Chronic	oral	No informatio	n available	No information available	-			
Chronic	nronic dermal No information availa			No information available	-			
Chronic inhalation No information		n available	No information available	-				
	CMR effects (c	arcinogenicity: n	nutagenicity: repr	roductive toxicity)				
	Carcinogenicit			Current studies on test animals did not indicate carcinogenic effects.				
	Mutagenicity <i>in-vitro</i> :		<u> </u>	Current in vitro tests did not indicate mutagenic effects.				
	Genotoxicity:		No information available					
	Mutagenicity i	Mutagenicity in-vivo:		Current in vivo tests did not indicate mutagenic effects.				
	Germ cell mut	agenicity:	No information available					
	Reproductive t	toxicity:	No toxicity on reproductive organs was determined in reproductive organs.					
	Summary of ev	valuation of the	CMR properties:	-				
11.2.	Information on other hazards:							
11.2.1.	Endocrine disr	upting propertie	S:					
	No known end	locrine disruptin	g properties that	affect human health.				
11.2.2.	Other informa	tions:						

SECTION 12. Ecological informa	nation
---------------------------------------	--------

12.1. Toxicity

Acute toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	-	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	-	-
Algae/aquatic plants	IC ₅₀	8 days	No information available	No information available	_	-
Microorganisms	LC ₅₀	72 hours	-	-	-	-
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note



Page 11 of 16

Product code: GLS-OT-X** Date of compilation: 14 November 2022 Version: 5	Trading name:		GRAM LUGOL SOL	UTION, STABILIZED		
· ·	Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version:	5

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

12.2. Persistence and degradability

Abiotic degradation

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

Biod	eai	rad	lati	n

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

12.3. Bioaccumulative potential

Octanol-water partition coefficient (log Kow)

Value	Concentration	рН	°C	Method	Evaluation	Note
-	No information available	-	_	No information available	No information available	-

	, ,			
Value	Species	Method	Evaluation	Note



Page 12 of 16

Trading		:									Page	12 of 16
aag	name:				GRAM	LUGO	L SOL	UTION,	STABIL	IZED		
Product	code:	GLS-OT-X**		Date of compilation:		14 November 2022		2022	Version: 5			
No information available		No availab	inform le	nation No inform available			n	No info	formation ble		No information available	

***************************************	Chronic ed Value	cotoxicity	/ Dose		osure	Spe	cies	Met	hod	Eval	uation	Note
Chronic t	oxicity on	fish	LC ₅₀	No infor	mation able	No inform availal		No informavailab	ation	No inform availab		_
	oxicity on (<i>Daphnic</i>		EC ₅₀	No infor availa	mation able	No inform availal		No inform availab	ation	No inform availab		_
	Mobility in Known or No inform	predicte	d distributi ailable	on in e	environm	ental co	ompart	ments:				
	Surface te											
	Value		°C	C	oncentrat	tion		Metho	od		No	ote
į	No informatic available		ormation ilable		informat ilable	ion	No inf availat	ormation ble	tion _			
	Adsorptio	n / deso	rption									
Transpor	t A	A/D coeff enry's co	ficient	lc	og Kow	Eva	aporati	on rate	Me	thod		Note
Soil-wate	er No availa		formation	No ir availa	nformatio able		inform ailable	nation	No info		n -	
3011-wate	Nater-air No information No		No information No infor available available			rmation No inform			n _			
Water-ai	r			availa	able	No information No information available available				C		



Page 13 of 16

Trading name:	GRAM LUGOL SOLUTION, STABILIZED						
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5			

12.6.	Endocrine disrupting propertie	
12.0.		g properties that affect the environment.
	No known endocrine disruptin	g properties that affect the environment.
12.7.	Other adverse effects	
	No adverse effects are expected	ed.
SECTIO	N 13. Disposal considerations	
13.1.	Waste treatment methods	
13.1.	waste treatment methods	
13.1.1.	Product/Packaging disposal:	
	Submit for disposal to the le Protection.	gal person authorized by the Ministry of Environmental and Nature
13.1.2.	Waste codes/waste designat	ions according to Law:
	No information available	3
13.1.3.	Waste treatment – relevant i	nformation:
	No information available	
13.1.4.	Sewage disposal – relevant i	nformation:
	Waste must not be disposed	of into the sewage system.
13.1.5.	Other disposal recommenda	tions:
	authorized by the ministry in	ct's remains into the sewage system. Submit the remains to the collectors charge. Do not dispose of the packaging into the sewage system. Submit ors authorized by the ministry in charge. Do not dispose of in places where
13.1.6.	Relevant Community provisi	ons:
	-	
SECTIO	N 14. Transport information	
	Transporting/shipment by road	d (ADR)
UN num	ıber:	Not subject to transport regulations.
UN prop	per shipping name:	-
Transpo	rt hazard class(es):	-



				Page 14 of	16
Trading name:		GRAM LUGOL SOL	UTION, STABILIZED		
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version:	5
Packing group:		-			
Environmentally h		-			
Special precaution		-			
	rting/shipment by rai				
UN number:		Not subject to transport	regulations.		
UN proper shippi		-			
Transport hazard	class(es):	-			
Packing group:		-			
Environmentally h	nazardous:	-			
Special precaution	ns for user:	-			
Inland w	aterway transport (A	DN)			
UN number:		Not subject to transport	regulations.		
UN proper shippi	ng name:	-			
Transport hazard	class(es):	-			
Packing group:		-			
Environmentally h	nazardous:	-			
Special precaution	ns for user:	-			
Transpor	rting/shipment by se	a (IMDG)			
UN number:		Not subject to transport	regulations.		
UN proper shippi	ng name:	-			
Transport hazard	class(es):	-			
Packing group:		-			
Environmentally h	nazardous:	-			
Special precaution	ns for user:	-			
Transpor	rting/shipment by air	(ICAO-TI/IATA-DGR)			
UN number:		Not subject to transport	regulations.		
UN proper shippi	ng name:	-			
Transport hazard	class(es):	-			
Packing group:		-			

Further information: The product is not subject to classification.

SECTION 15. Regulatory information

Environmentally hazardous: Special precautions for user:



Page 15 of 16

Trading name:	GRAM LUGOL SOLUTION, STABILIZED						
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5			

15.1.	Safety, health and enviror	nmental regulations/legislation specific for the substance or mixture			
	EU regulations				
	Authorization and/or rest	rictions of use			
	Authorizations:	-			
	Restrictions:	-			
	Other EU regulations:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council on 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 XVIII);			
	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	N 16. Other information	
16.1.	Indication of changes:	-



Page 16 of 16

Trading name:	GRAM LUGOL SOLUTION, STABILIZED					
Product code:	GLS-OT-X**	Date of compilation:	14 November 2022	Version: 5		

	1	
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	cation	Classification procedure
_		-
16.5.	Relevant H statements (numb	per and full text)
	H: -	-
16.6.	Training advice:	-
16.7.	Further information:	** "X" in the product code marks different volumes (different packagings of the product) We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.

ANNEX: Exposure scenario resulting to Chemical safety assessment	



Page 1 of 18

Trading name:		ER SOLUTION 2			
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

SECTI	ON 1: Identification of	the substance	e/mixture	and of the company/undertaking		
1.1	Product identifier					
	Trading name:	GRAM DECOLORIZER SOLUTION 2				
	Chemical name:	-				
	Catalogue number:	GD2-OT-X**				
1.2	Relevant identified uses of the substance or mixture and uses advised against					
	Uses:		For use	in Gram bacterial staining.		
	Uses advised against:		Only the	e identified uses are advised.		
	Reason why uses advi	eason why uses advised against:		The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes.		
1.3	Details of the supplier	Details of the supplier of the safety data sheet				
	Supplier:	Supplier:		BioGnost Ltd.		
	Address:		Medjugorska 59, Zagreb			
	Telephone number:		+385 1 2409997			
	Telefax.:		+385 1 2404039			
	e-mail of competent person:		msds@biognost.hr			
	National contact:		-			
1.4	Emergency telephone number					
	National Protection ar	nd 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	n (EC) No 1272/2008 (CLP)				
	Hazard class and category co	de: Hazard statements*:				
	Flam. Liq. 2 H225					
	Eye Irrit. 2 H319					
	STOT SE 3	H336				
		EUH066				
2.1.2.	Additional information					
	-					
*For fu	ıll text of Hazard- and EU Hazard-staten	nents: see SECTION 16				
2.2	Label elements					
	Product identification: GRA	M DECOLORIZER SOLUTION 2				



Page 2 of 18

Trading name:					
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

	Identification number:	-			
	Authorization number:	-			
	Hazard pictograms:	GHS02 GHS07			
	Signal word:	Danger			
	Hazard statements:	 H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. EUH066 Repeated exposure may cause skin dryness or cracking. 			
	Precautionary statements:	P210 Keep away from heat/sparks/open flames/hot surfaces. Do not smoke. P280 Wear protective gloves/protective clothing/eye/protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.			
	Supplemetal hazard information (EU):	-			
2.3	Other hazards				
	The product has no other kno	The product has no other known specific hazards for human or environment.			
	Results of PBT and vPvB assessment: Based on available data, the product does not contain any PBT or vPvB substances.				
	Endocrine disrupting propert	y: Based on available data, does not contain endocrine disruptors.			

SECTION 3. Co	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)				
64-17-5/ 200-578-6/ 603-002-00-5	01-2119457610-43- 0147	40 – 60 %	ethanol	Flam. Liq. 2; H225				
67-64-1/ 200-662-2/ 606-001-00-8	-	50 - 70 %	acetone	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336				

SECTION 4. First aid measures



Page 3 of 18

Trading name:		ER SOLUTION 2			
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

	General notes:	If the suggested first aid measures do not prove sufficient, seek medical attention.
	Following inhalation:	Take the victim into fresh air, loosen his clothes and place him in a comfortable position. If breathing difficulty occurs, administer artificial respiration. In case of complaints call a physician.
	Following skin contact:	Remove the contaminated clothes. Wash the skin surface under plenty of running water. Seek medical assistance if the symptoms of irritation remain.
	Following eye contact:	In case of contact with eyes flush with water holding eyelids apart and moving the eyeballs (for at least 10 minutes). If the symptoms remain, immediately call in ophthalmologist.
	Following ingestion:	Place the victim in a comfortable position. Rinse the mouth with clean water. If the victim is conscious induce vomiting. Do not give the victim anything orally, and do not induce vomiting if the victim is unconscious or suffers from convulsions.
	Self-protection of the first aider:	-
4.2	Most important symptoms and eff	ects, both acute and delayed
	Following inhalation:	Depending on concentration and exposure time, it may lead to mucosa irritation, cough, and dyspnea.
	Following skin contact:	Defatting, dry skin.
	Following eye contact:	Depending on concentration and exposure time, it may lead to irritation, tearing, redness and pain.
	Following ingestion:	Depending on concentration and exposure time, it may lead to stinging and digestive mucus damage, abdominal pain, nausea, vomiting.
4.3	Indication of any immediate media	cal attention and special treatment needed

SECTI	TION 5. Firefighting measures					
5.1	Extinguishing media					
	Suitable extinguishing media:	Dry powder, alcohol-resistant foam, water spray, carbon-dioxide.				
	Unsuitable extinguishing media:	No information available.				
5.2	Special hazards arising from the substance or mixture					
	Hazardous combustion products: No information available.					
5.3	Advice for firefighters					
	Wear full protective clothing and self-contained breathing apparatus. Cool the fire affected containers with water spray. Use water spray to dissipate alcohol vapors.					
5.4	Additional information					



Page 4 of 18

Trading name:		GRAM DECOLOR	RIZER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

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SECTIO	ON 6. Accidental release meas	ures				
6.1	Personal precautions, protecti	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.				
	Emergency procedures:	Mark the area using proper signs.				
6.1.2.	For emergency responders:					
	ventilation. Vapors may accun	and clothing and inhaling gases, vapors and aerosols. Ensure adequate nulate at floor level in low and confined spaces. Remove all heat, ignition achines. Ignition spark arrestor must not be operated in the danger area. Use f the risk of slipping.				
6.2	Environmental precautions:					
	Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.					
6.3	Methods and material for con	tainment and cleaning up				
6.3.1.	Bunding, covering of drains; capping procedures:	Sand protective barrier or barriers made of similar materials.				
6.3.2.	Cleaning up:	Collect the spilled product with inert, non-combustible absorbent (e.g. sand, vermiculite, earth) then place into a suitable, closed, properly labelled chemical waste container for removal/disposal.				
6.3.3.	Other information:	Secure proper ventilation. Do not use incompatible materials (see Section 10).				
6.4	Reference to other sections					
	See Section 7 for information See Section 8 for information	on safe handling. on personal protection equipment.				
	See Section 13 for disposal information.					

SECTIO	SECTION 7. Handling and storage			
7.1	Precautions for safe handling			
7.1.1.	Protection measures			



Page 5 of 18

Trading name:					
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

	Measures to prevent fire:	Use in well ventilated storage rooms. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use non-sparkling tools and equipment.		
	Measures to prevent aerosol and dust generatio	n: Ensure adequate ventilation.		
	Measures to protect the environment:	Prevent spilling into the sewage system and waterways.		
	Other measures:	Protect against electrostatic charges.		
7.1.2.	Advice on general occupational hygiene:			
	Do not eat, drink or smoke in the workspace. The	proughly wash hands after work and before eating.		
7.2	Conditions for safe storage, including any incom	patibilities		
	Technical measures and storage conditions:	Store in a well-ventilated place, protected from sunlight, away from sources of heat and ignition, in its original, unopened and hermetically sealed packaging, away from oxidizing agents, food, feed and articles of consumption.		
	Packaging materials:	Manufacturer's original packaging.		
	Requirements for storage rooms and vessels:	Keep away from food and drink. Keep the containers tightly closed.		
	Advices for storage equipment:	The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation.		
	Further information on storage conditions:	Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10).		
7.3	Specific end use(s)			
	Recommendations:	-		
	Industrial sector specific solutions:	-		

SECTION 8. Exposure controls/personal protection						
8.1 Control parameters						
Substance	CAS No	·	exposure limit t term values	Biological limit values		
		ppm	mg/m³	-		
Ethanol	64-17-5	1000/-	1900/-	-		
Acetone	67-64-1	500/-	1210/-			
		·				



Page 6 of 18

Trading name:		GRAM DECOLORIZ			
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

Substance name:	-							
EC No:	-	CAS No	:	_				
DNEL								
				Inc	dustria	l		
Route of	Acu	Acute Acute			Chronic		Chronic	
exposure:	effect	local	effe	ect systemi	С	effect local		effect systemic
Oral	-		-		-			-
Inhalation	1900 mg (ethanol)		-		-			380 mg/m³ (ethanol) 1210 mg/m³ (acetone)
Dermal	-		-		-			343 mg/kg (ethanol) 186 mg/kg (acetone)
Critical physical par	ameters: s	olubility.	flamm	nability, cor	rrosivity	r: -		g,g (accreme)
					nsume			
Route of	Ac	ute		Acute		Chronic		Chronic
exposure:		t local	effe	ect systemi	с	effect local		effect systemic
Oral	-		-		-			87 mg/kg bw/day (ethanol)
Inhalation	950 m	_	-		_			114 mg/m³ (ethanol)
	(ethan	ol)						200 mg/m³ (acetone) 206 mg/kg (ethanol)
Dermal	-		-		-			62 mg/kg (acetone)
PNEC								<u> </u>
Environmental prot	ection tard	get			PNEC			
					0.96 r	ng/l (ethanol)		
Fresh water					10.6 r	ng/l (acetone)		
Freshwater sedime	nts					g/kg (ethanol)		
						ng/kg (acetone)		
Marine water					0.79 mg/l (ethanol)			
					1.06 mg/kg (acetone)			
Marine sediments					2.9 mg/kg (ethanol) 3.04 mg/kg (acetone)			
Food chain			+					
1000 Citam			380-720 mg/kg (ethanol)					
Microorganisms in sewage treatment			580 mg/l (ethanol) 100 mg/l (acetone)					
				ng/kg (ethanol)				
Soil (agricultural)			33.3 mg/kg (acetone)					
Air					no inf	ormation availab	ole	



Page 7 of 18

Trading name:					
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

8.2	Exposure controls			
8.2.1.	Appropriate engineering controls			
	Substance/mixture related measur prevent exposure during identified		In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.	
	Structural measures to prevent exposure:		In accordance with Section 7.	
	Organisational measures to prevenexposure:	nt	Organization of work in order to reduce other worker's influence during work process.	
	Technical measures to prevent exp	oosure:	In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin. Use according to general application methods and with adequate ventilation.	
			Use non-sparkling ventilation system.	
			Provide appropriate personal protective equipment, safety shower and eye-wash station.	
8.2.2.	Personal protection equipment			
8.2.2.1.	Eye and face protection:		propriate, chemical-proof protective glasses/face shield (EN 321-1:2022, EN 166).	
8.2.2.2.	Skin protection			
	Hand protection:	Use ap	propriate, chemical-resistant protective gloves (EN 374).	
	Other skin protection:	Use ap	propriate protective clothing.	
8.2.2.3.	Respiratory protection:	In case of normal usage and ventilation, it is not necessary. concentration of ethyl alcohol exceeds occupational exposure liming in the air, use a self-contained breathing apparatus. For short contact and if the oxygen content of the air is greater than 18 %, use a protective gas mask with filter A (EN 14837/A1).		
8.2.2.4.	Thermal hazards:	No the	rmal hazards known.	
8.2.3.	Environmental exposure controls			
	Substance/mixture related measures to prevent exposure:	See Se	ction 6	
	Structural measures to prevent exposure:	Use modern 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	



Page 8 of 18

Trading name:		GRAM DECOLORIZ	ZER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

 Physical state: Colour: Odour/odour threshold: Melting point / freezing point: Boiling point or initial boiling point and boiling range: Flammability:	Value liquid colourless acetone like/no information available No information available No information available	Method No information available No information available No information available No information available
Colour: Odour/odour threshold: Melting point / freezing point: Boiling point or initial boiling point and boiling range:	colourless acetone like/no information available No information available	No information available No information available
 Odour/odour threshold: Melting point / freezing point: Boiling point or initial boiling point and boiling range:	acetone like/no information available No information available	No information available
Melting point / freezing point: Boiling point or initial boiling point and boiling range:	available No information available	
Boiling point or initial boiling point and boiling range:		No information available
point and boiling range:	No information available	
Flammability:		No information available
	No information available	No information available
Lover and upper explosion limit:	No information available	No information available
Flash point:	20 °C	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

SECTION	SECTION 10. Stability and reactivity				
10.1	Reactivity:	See Section 10.5.			
10.2	Chemical stability:	Stable within normal temperature and general work conditions.			
10.3	Possibility of hazardous reactions:	See Section 10.5.			
10.4	Conditions to avoid:	Keep away from heat, sparks, open flames, strong heating and ignition sources. No smoking.			
10.5	Incompatible materials:	Strong oxidizing agents (inorganic strong acid, nitric acid, perchlorates, peroxy compounds, perchloric acid, permanganates etc.), alkali metals, alkali earth metals.			
10.6	Hazardous decomposition products:	Carbon monoxide and carbon dioxide.			



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

amended by Regulation (EU) No. 2020/878

Page 9 of 18

Trading name:		GRAM DECOLORIZ	ZER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

	oxicological inforr ation on hazard cla		in Regulat	ion (EC) No 127	72/2008	
Acute t		sses as defined i	iii kegulai	1011 (LC) 110 121	2/2000	
Route of exposure:	Method	Species	Dose	LD ₅₀ /LC ₅₀ or ATE _{mix}	Exposure t	ime Results
Oral:	-	rat		LD ₅₀	-	7.060 mg/kg (ethanol) 5.800 mg/kg (acetone)
Dermal:	-	rabbit		LD ₅₀	-	>20.000 mg/l (ethanol) 20.000 mg/kg (acetone)
Inhalation:	-	rat		LC ₅₀	4 h	>8.000 mg/l (ethanol) 76 mg/l (acetone)
Spocifie	target organ toxic	ity – single ovno	ocuro (STO	T CEI:		
Specific		ecific effects	Jaule (310	Target o	organ	Note
Oral:	No information		<u> </u>			-
Dermal:	No informatio	n available	1	No information available -		-
Inhalation:	Narcotic effec	ts	١			May cause drowsiness or dizziness.
Aspirat	ion hazard:	N	o informa	ition available.		
Irritatio	n and corrosion					
	Exposi	ure time	Species	<u>Evaluati</u>	on Method	Note
Skin corrosion/irritat	ion:	-		-	-	-
Serious eye damage/irritatio	on -	-		-	-	-
Sensitiz	zation					
Skin sensitizatio	n: No ii	nformation avail	able.			
Respiratory sens	sitization: No i	nformation avail	ahla			



Page 10 of 18

Trading name:		GRAM DECOLORIZ	ZER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

Oral exposure:	unconscious	of great q ness and alcoh	uantities may ol poisoning. In	cause dizzin case of swallowi		nausea and			
Dermal exposure	· ·	After prolonged or repeated exposure symptoms may include: defatting, dryness and cracking of skin.							
Inhalation expos	ure: Inhalation of membranes.	great quantitie	es may cause diz	ziness, euphoria	and mild irritation	of the mucou			
Eye exposure:	May cause ir	ritation and re	dness.						
Repeate	ed dose toxicity (sub	acute, 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	-			
Chronic inhalation	No information available	No information available	No information available	No information available	No information available	-			



Page 11 of 18

Trading name:		GRAM DECOLORIZ	ZER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

	Specific target	organ toxicity - repeated e	хро	sure (STOT	RE):		
		Specific effec	cts		Target organ	Note	
Subacu	te oral	No information available			No information available	-	
Subacu	te dermal	No information available			No information available	-	
Subacu	te inhalation	No information available			No information available	-	
Subchr	onic oral	No information available			No information available	-	
Subchr	onic dermal	No information available			No information available	-	
Subchr	onic inhalation	No information available			No information available	-	
Chronic	oral	No information available			No information available	-	
Chronic	dermal	No information available			No information available	-	
Chronic	inhalation	No information available			No information available	_	
	CMR effects (carcinogenicity; mutagenic		-		<u>*</u>		
	CMR effects (c	arcinogenicity; mutagenicit	y; re	productive	toxicity)		
	Carcinogenicit		Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.				
	Mutagenicity i			Based on available data, the classification criteria are not met.			
	Genotoxicity:						
	Mutagenicity i			Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met.			
	Germ cell muta	-		Based on available data, the classification criteria are not met.			
	Reproductive t	oxicity.	Das	sed on availa	able data, the classification c	interia are not met.	
	Summary of properties:	evaluation of the CN	ΜR	Based on met.	available data, the classifica	ation criteria are no	
11.2	Information or	other hazards:					
11.2.1.		upting properties:					
	The substance components of disrupting pro Article 57(f) regulation (EU	e/mixture does not control onsidered to have endocrible of the end	ine CH ted ion				

SECTION 12. Ecological information



Page 12 of 18

Trading name:		GRAM DECOLORIZ	ZER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

12.1 Toxicity						
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	golden orf	No information available	8.140 mg/l /48 h (ethanol) 6.210 mg/l (acetone)	-
Crustacea:	EC ₅₀	48 hours	daphnia magna	No information available	7.800 mg/l (ethanol) 8.800 mg/l (acetone)	-
Algae/aquatic plants	IC ₅₀	4 days	algae	No information available	5.000 mg/l / 7d (ethanol) 530 mg/l (acetone)	-
Other organisms	-	-	-	-	-	-
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-
Algae/aquatic plants	IC ₅₀	72 hours	No information available	No information available	No information available	-
Other organisms	-	-	-	-	-	-

12.2	Persist	ence and degradability			
	Abiotio	degradation			
		Degradation half-lives	Method	Evaluation	Note
Marine water		No information available	No information available	No information available	-
Fresh wa	ter	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	-



Page 13 of 18

Trading name:	GRAM DECOLORIZER SOLUTION 2						
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5		
			_				
	:	i .	1	!			

	Biodegr	adati	ion									
% De	gradation	1	7	Γime (da	ays)		Method	Evaluation		า	Note	
No info			No availa		ormation				informatior lable	1	No info availabl	rmation e
40.0												
12.3	Bioaccu				- ff: -: +	(1 1/	- 1					
	:			- :	efficient						8 8 9 9	N
Val	lue	Con	ncentra		рН	°C	Method		Evalua	ation		Note
-		-		-	-	-	-		-		-	
	Bioconc	entra	ation fa	actor (B	(F)							
V	alue			Species			Method		Evaluatio	on		Note
		N	10		ormation	No int	formation	No	No information			
-			vailabl			availa			ailable		-	
	Chronic	ecot	oxicity	•	1			-		1		:
	Value			Dose	3 :	osure ime	Species	I	Method	Evalu	ıation	Note
		٠.			No		No	No		No		
Chronic	toxicity o	on fis	h	LC ₅₀	ıntor avail	mation able	information available	1	ormation ailable	inform availab		_
					No		No	No		No		
Chronic toxicity on crustacea (<i>Daphnia</i>)		EC_{50}		mation	information		ormation	inform		-		
					avail	able	available	av	ailable	availak	ole	
12.4	Mability	, in a	o:l									
12.4	Mobility			ا مازدید:ا-	ution in	an dirar	montal comme	t no o	ate:			
	No info				oution in (environi	mental compar	uner	ILS.			
	Surface			iiiaDie								
	Valu		1011.	°C		oncentr	ration	Ι. Λ	ethod			Note
	vaiu	C .				OTICETILI	ation	IVI	Ciriou			INULE



Page 14 of 18

Trading name:	GRAM DECOLORIZER SOLUTION 2				
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

	No informa availabl		No information available	No information available	No informatio available	on -	
	A .l						
Transpo		A/I	desorption D coefficient ry's constant	log Kow	Evaporation rate	Method	Note
Soil-wa	ter	No availa	information able	No information available	No information available	No information available	-
Water-a	air	No availa	information able	No information available	No information available	No information available	-
Soil-air		No availa	information able	No information available	No information available	No information available	-
12.5	This sub	ostance	and vPvB asset e/mixture conta very persistent	ins no component	s considered to be nulative (vPvB) at l	either persistent, evels of 0.1% or hi	bioaccumulative and gher.
	This subtoxic (Pl	ne disi	e/mixture conta very persistent rupting propert e/mixture does i REACH Article 5	ins no component and very bioaccur ies not contain compo	nulative (vPvB) at longer onents considered on Delegated regula	evels of 0.1% or hi	gher. disrupting propertie
12.6.	This subtoxic (Pl	ne disi estance ostance ng to F	e/mixture conta very persistent rupting propert e/mixture does of REACH Article 5 J) 2018/605 at l	ins no component and very bioaccur es not contain compo 7(f) or Commission	nulative (vPvB) at longer onents considered on Delegated regula	evels of 0.1% or hi	gher. disrupting propertie
12.6.	This subtoxic (Pl Endocri The subtoxic according Regulation Control of the subtoxic according Regulation Cont	ne disi estance ng to F ion (El	e/mixture conta very persistent rupting propert e/mixture does REACH Article 5 J) 2018/605 at I	ins no component and very bioaccur les not contain compo 7(f) or Commission evels of 0.1% or hi	nulative (vPvB) at longer onents considered on Delegated regula	to have endocrine	disrupting propertie:
12.6.	This subtoxic (Pi Endocri The sub accordin Regulat Other a	ne dispostance ne dispostance ng to F ion (El dverse	e/mixture conta very persistent rupting propert e/mixture does REACH Article 5 J) 2018/605 at I	ins no component and very bioaccur ies not contain compo 7(f) or Commission evels of 0.1% or hi	onents considered on Delegated regula	to have endocrine	gher. disrupting properties
12.6. 12.7.	This subtoxic (Pi Endocri The subtoxic according Regulation of Do not	ne dispostance ne dis	e/mixture conta very persistent rupting propert e/mixture does of REACH Article 5 J) 2018/605 at l effects product or its r	ins no component and very bioaccur ies not contain compo 7(f) or Commission evels of 0.1% or hi	onents considered on Delegated regula	to have endocrine	gher. disrupting properties
12.6. 12.7. SECTIO 13.1	This subtoxic (Pl Endocri The subtoxic according Regulation Control Pl Other a Do not Waste	ne dispostance of the disposition (EU disposal d	e/mixture contavery persistent rupting propert e/mixture does of REACH Article 5 J) 2018/605 at l effects product or its r	ins no component and very bioaccur les not contain component component contain component contain component contain component component contain contai	onents considered on Delegated regula	to have endocrine	gher. disrupting properties
12.6. 12.7. SECTIO 13.1	This subtoxic (Pi Endocri The subtoxic according Regulation Continuation Continuat	ne disposation (EU disposation) disposation (e/mixture contavery persistent rupting propert e/mixture does in REACH Article 5 J) 2018/605 at I effects product or its r consideration ment methods	ins no component and very bioaccur ies not contain component component contain component contain component contain component component contain conta	onents considered on Delegated regula	to have endocrine tion (EU) 2017/210	disrupting propertie
12.5 12.6. 12.7. SECTIO 13.1. 13.1.1.	This subtoxic (Pl Endocri The subtoxic according Regulate Other at Do not Waste Produ Subm Protee	ne dispostance ne dis	e/mixture contavery persistent rupting propert e/mixture does of REACH Article 5 J) 2018/605 at I effects product or its re consideration ment methods kaging disposa	ins no component and very bioaccur ies not contain component component contain component contain component contain component component contain conta	onents considered on Delegated regularing gher. er system, waterwarized by the Minist	to have endocrine tion (EU) 2017/210	disrupting propertie



SAFETY DATA SHEET

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

Page 15 of 18

Trading name:		GRAM DECOLORIZ	ZER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

13.1.3.	Waste treatment – relevan	it information:
	No information available	
13.1.4.	Sewage disposal – relevan	t information:
	Waste must not be dispos	ed of into the sewage system.
13.1.5.	Other disposal recommen	
	authorized by the ministry	oduct's remains into the sewage system. Submit the remains to the collectors in charge. Do not dispose of the packaging into the sewage system. Submit ectors authorized by the ministry in charge. Unused product residues may be
13.1.6.	Relevant Community prov	isions:
	Disposal must be made ac	cording to official regulations.
SECTION	14 TRANSPORT INFORM	ATION
	Transporting/shipment by re	oad (ADR)
UN numl	ber:	1170
UN prop	er shipping name:	Ethanol solution
Transpor	t hazard class(es):	3
Packing (group:	II
Environm	nentally hazardous:	-
Special p	recautions for user:	-
	Transporting/shipment by ra	ail (RID)
UN numl	ber:	1170
UN prop	er shipping name:	Ethanol solution
Transpor	t hazard class(es):	3
Packing (group:	II
Environm	nentally hazardous:	-
Special p	recautions for user:	-
	Inland waterway transport (A	ADN)
UN number:		1170
UN proper shipping name:		Ethanol solution
Transpor	t hazard class(es):	3
Packing (group:	II
Environm	nentally hazardous:	-
Special p	recautions for user:	-



SAFETY DATA SHEET

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

Page 16 of 18

Trading name:		GRAM DECOLORIZ	ZER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

Transporting/shipment by sea (II	MDG)
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	П
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:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	II
Environmentally hazardous:	-
Special precautions for user:	-
Further information: -	

SECTION	TION 15. Regulatory information				
15.1	Safety, health and envi	Safety, health and environmental regulations/legislation specific for the substance or mixture			
	EU regulations				
	Authorization and/or re	estrictions of use			
	Authorizations:	-			
	Restrictions:	-			



Page 17 of 18

Trading name:		GRAM DECOLORIZ	ER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

15.2	Chemical safety assessment None	
	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
	Information according 1999, guideline)	/13/EC about limitation of emissions of volatile organic compounds (VOC-
		Regulation (EC) No 1907/2006; COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);
	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

SECTION 16. Other information			
16.1 Indication of changes:	-		



SAFETY DATA SHEET

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

Page 18 of 18

Trading name:		GRAM DECOLORIZ	ER SOLUTION 2		
Product code:	GD2-OT-X**	Revision date:	23 Dec 2022	Version:	5

16.2		viations 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.	.3. Key literature references and source of data:		-		
16.4.		cation and procedure (used to derive the classification for mixture according to Regulation (EC)		
Classifi	cation		Classification procedure		
-			-		
16.5.	Releva	nt H statements (numb	er and full text)		
		225	Highly flammable liquid and vapor.		
	H:	319	Causes serious eye irritation.		
		336	May cause drowsiness or dizziness.		
		(EUH066)	Repeated exposure may cause skin dryness or cracking.		
16.6.	Trainin	g advice:	-		
16.7.	6.7. 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	
-	



Page 1 of 17

Trading name:		GRAM SAFRAN	IN SOLUTION		
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

SECTI	ON 1: Identification of	the substance	e/mixture	and of the company/undertaking	
1.1	Product identifier				
	Trading name:	GRAM SAFF	RANIN SO	LUTION	
	Chemical name:	-			
	Catalogue number:	GSF-OT-X**	ī		
1.2	Relevant identified uses of the subs		tance or m	nixture and uses advised against	
	Uses:		For use	in Gram staining using BioGram 4 kit.	
	Uses advised against:		Only the	e 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		
	Telephone number:		+385 1 2409997 +385 1 2404039		
	Telefax.:				
	e-mail of competent p	person:	msds@b	<u>piognost.hr</u>	
	National contact:		-		
1.4	Emergency telephone	number			
	National Protection ar	nd Rescue Dire	ectorate:	112	
	Medical information:			+385 1 2348 342	
	Other information:			-	

SECTIO	ON 2. Hazards identification			
2.1	Classification of the substance or mixture			
2.1.1	Classification according to F	Classification according to Regulation (EC) No 1272/2008 (CLP)		
	Hazard class and ca	tegory code:	Hazard statements*:	
	Flam. Liq. 3		H226	
2.1.2.	Additional information			
	-			
*For fu	Ill text of Hazard- and EU Haza	ard-statements: see S	ECTION 16	
2.2	Label elements			
	Product identification:	GRAM SAFRAN	IN SOLUTION	
	Identification number:	-		
	Authorization number:	-		



Page 2 of 17

Trading name:		GRAM SAFRAN	IN SOLUTION		
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

	Hazard pictograms:	GHS02
	Signal word:	Danger
	Hazard statements:	H226 Flammable liquid and vapor.
	Precautionary statements:	P210 Keep away from heat, hot sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P280 Wear protective gloves/protective clothing/eye/protection/face protection.
	Supplemetal hazard information (EU):	-
2.3	Other hazards	
	The product has no other know	n specific hazards for human or environment.
	Results of PBT and vPvB assessing PBT or vPvB substances.	ment: Based on available data, the product does not contain any
	Endocrine disrupting property:	Based on available data, does not contain endocrine disruptors.

SECTION 3. Co	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)	
64-17-5/ 200-578-6/ 603-002-00-5	01-2119457610-43- 0147	10 – 20 %	ethanol	Flam. Liq. 2; H225	

SECT	SECTION 4. First aid measures			
4.1	Description of first aid measu	ires		
	General notes:	If the suggested first aid measures do not prove sufficient, seek medical attention.		
	Following inhalation:	Take the victim into fresh air, loosen his clothes and place him in a comfortable position. If breathing difficulty occurs, administer artificial respiration. In case of complaints call a physician.		
	Following skin contact:	Remove the contaminated clothes. Wash the skin surface under plenty of running water. Seek medical assistance if the symptoms of irritation remain.		



Page 3 of 17

Trading name:		GRAM SAFRAN	IN SOLUTION		
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

	Following eye contact:	In case of contact with eyes flush with water holding eyelids apart and moving the eyeballs (for at least 10 minutes). If the symptoms remain, immediately call in ophthalmologist.
	Following ingestion:	Place the victim in a comfortable position. Rinse the mouth with clean water. If the victim is conscious induce vomiting.
	<u> </u>	Do not give the victim anything orally, and do not induce vomiting if the victim is unconscious or suffers from convulsions.
	Self-protection of the first aider:	-
4.2	Most important symptoms and ef	fects, both acute and delayed
	Following inhalation:	Inhalation of larger quantities may affect the central nervous system.
	Following skin contact:	Prolonged or repeated dermal contact may cause the defatting and dryness of the skin.
1		dryffess of the skin.
	Following eye contact:	May irritate the eyes.
	Following eye contact: Following ingestion:	-
4.3	Following ingestion:	May irritate the eyes.

SECTI	SECTION 5. Firefighting measures				
5.1	Extinguishing media				
	Suitable extinguishing media:	Extinguishing powder, alcohol-resistant foam, water, carbon-dioxide.			
	Unsuitable extinguishing media:	Water with full jet.			
5.2	ubstance or mixture				
	Hazardous combustion products:	Highly flammable liquid and vapour. In case of fire, smoke, and other combustion products (carbon monoxide, carbon dioxide) may be formed, the inhalation of such combustion products can have serious adverse effects on health. Vapours may form an explosive mix with air. Vapours may be ignited by open flames, sparks, electrical equipment, or static charge. Vapours may travel to great distances, ignite in contact with ignition sources and flash back to the primer source (container). Vapours of ethyl alcohol mix greatly with air and may form an explosive mixture. Air containing 3.3 – 19 % ethyl alcohol vapours may explode in contact with ignition sources. Diluting the mixture with large amounts of water results in the loss of its flammability (around 10 % concentration of ethyl alcohol).			
5.3 Advice for firefighters					
	Wear full protective clothing and self-contained breathing apparatus. Cool the fire affected cont water spray. Use water spray to dissipate alcohol vapours.				
5.4 Additional information					
	-				



Page 4 of 17

Trading name:	GRAM SAFRA		IN SOLUTION		
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

SECTIO	ON 6. Accidental release meas	ures	
6.1	Personal precautions, protective equipment and emergency procedures		
6.1.1.	For non-emergency personnel		
	Protective equipment:	Use personal protective equipment (see Section 8).	
	Accident prevention methods	Evacuate members of all non-essential personnel and those members without protective equipment.	
	Emergency procedures:	Mark the area using proper signs.	
6.1.2.	For emergency responders:		
	Avoid contact with skin, eyes and clothing and inhaling gases, vapours and aerosols. Ensure adequate ventilation. Vapours may accumulate at floor level in low and confined spaces. Remove all heat, ignition and spark sources, turn off machines. Ignition spark arrestor must not be operated in the danger area. Use spark-proof tools. Be aware of the risk of slipping.		
6.2	Environmental precautions:		
	Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.		
6.3	Methods and material for containment and cleaning up		
6.3.1.	Bunding, covering of drains; capping procedures:	Sand protective barrier or barriers made of similar materials.	
6.3.2.	Cleaning up:	Collect the spilled product with inert, non-combustible absorbent (e.g. sand, vermiculite, earth) then place into a suitable, closed, properly labelled chemical waste container for removal/disposal. During the collection, placement, disposal of the waste, wear appropriate individual protective equipment. Flush the remains with plenty of water. The product loses its flammability, if diluted with significant amount of water (approx. 10% solution).	
6.3.3.	Other information:	Secure proper ventilation. Do not use incompatible materials (see Section 10).	
6.4	Reference to other sections		
	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.		

SECTION 7. Handling and storage	
7.1	Precautions for safe handling
7.1.1.	Protection measures



Page 5 of 17

Trading name:		GRAM SAFRANIN SOLUTION						
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6			

	Measures to prevent fire:		Use in well ventilated storage rooms. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use non-sparkling tools and equipment.				
	Measures to prevent aerosol and dust generatio	n:	Ensure adequate ventilation.				
	Measures to protect the environment:		Prevent spilling into the sewage system and waterways.				
	Other measures:		Protect against electrostatic charges.				
7.1.2.	Advice on general occupational hygiene:						
	Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating.						
7.2	Conditions for safe storage, including any incompatibilities						
	Technical measures and storage conditions:	Store in a well-ventilated place, protected from sunli away from sources of heat and ignition, in its orig unopened and hermetically sealed packaging, a from oxidizing agents, food, feed and articles consumption.					
	Packaging materials:	Manufactı	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:	be resista	ge must be made of hard material; floors must nt to chemicals. There must be no drain that eads into sewage system. Secure proper n.				
	Further information on storage conditions:	Do not place the unused material in the stora and do not use empty containers for stori chemicals. Do not store with incompatible mate Section 10).					
7.3	Specific end use(s)						
	Recommendations:	_					
	Industrial sector specific solutions:	-					

SECTION 8. Exposure controls/personal protection									
8.1 Control parameters									
Substance	CAS No	· ·	exposure limit t term values	Biological limit values					
		ppm	mg/m³	-					
Ethanol	64-17-5	1000/-	1900/-	-					
			·						
Substance name: -									



Page 6 of 17

										Page 6 01 17	
Trading name	e:	GR				RAM SAFRANIN SOLUTION					
Product code	e: (GSF-OT	-X**		Revisi	on date		23 Dec 2022		Version:	6
					ŧ					†	
EC No:		-	CAS No	:	-						
DNEL											
					In	dustrial					
Route of		Acu	te		Acute		C	hronic		Chronic	
exposure:		effect	local	effe	ct systemi	С	effe	ect local	(effect systemic	
Oral	-			-		-			-		
Inhalation		900 mg ethanol)		-		-			380 mg	/m³ (ethanol)	
Dermal	-			-		-			343 mg	/kg (ethanol)	
Critical physica	al parar	neters: s	olubility,	flamm	nability, co	rrosivity:		-			
					Co	nsumer					
Route of			cute		Acute			hronic		Chronic	
exposure:		effec	t local	effe	ect systemi	c	effe	ect local	(effect systemic	
Oral		-		-		-	-		87 mg/	kg bw/day (etha	anol)
Inhalation		950 m (ethan	_	-		-			114 mg/m³ (ethanol)		
Dermal		-		-		-	-		206 mg/kg (ethanol)		
PNEC											
Environmental	protec	tion targ	get			PNEC					
Fresh water						0.96 mg/l (ethanol)					
Freshwater sed	diments	5				3.6 mg/kg (ethanol)					
Marine water						0.79 mg/l (ethanol)					
Marine sedime	ents					2.9 mg/kg (ethanol)					
Food chain						380-720 mg/kg (ethanol)					
Microorganism	ns in se	wage tre	eatment			580 mg	/l (eth	anol)			
Soil (agricultur	al)					0.63 mg/kg (ethanol)					
Air						no information available					
8.2 Ex	xposure	control	S								
8.2.1. Ap	ppropri	iate eng	ineering	contro	ls						
		•	re related e during		sures to ied uses:	In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.					eep by

In accordance with Section 7.

Structural measures to prevent

exposure:



Page 7 of 17

Trading name:		GRAM SAFRANIN SOLUTION						
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6			

	Organisational measures to prever exposure:	nt	Organization of work in order to reduce other worker's influence during work process.				
	Technical measures to prevent exp	oosure:	In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin. Use according to general application methods and with adequate ventilation.				
	, , , , , , , , , , , , , , , , , , ,		Use non-sparkling ventilation system.				
			Provide appropriate personal protective equipment, safety shower and eye-wash station.				
8.2.2.	Personal protection equipment						
8.2.2.1.	Eye and face protection:	Use appropriate, chemical-proof protective glasses/face shield (EN ISO 16321-1:2022, EN 166).					
8.2.2.2.	Skin protection	rotection					
	Hand protection:	Use ap	e appropriate, chemical-resistant protective gloves (EN 374).				
	Other skin protection:	Use ap	propriate protective clothing.				
8.2.2.3.	Respiratory protection:	concer in the contac	e of normal usage and ventilation, it is not necessary. If ntration of ethyl alcohol exceeds occupational exposure limits air, use a self-contained breathing apparatus. For short t and if the oxygen content of the air is greater than 18 %, use ective gas mask with filter A (EN 14837/A1).				
8.2.2.4.	Thermal hazards:	No the	ermal hazards known.				
8.2.3.	Environmental exposure controls						
	Substance/mixture related measures to prevent exposure:	See Se	Section 6				
	Structural measures to prevent exposure:	Use m	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				

SECT	SECTION 9. Physical and chemical properties								
9.1	Information on basic physical and	chemical properties							
		Value	Method						
	Physical state:	liquid	No information available						
	Colour:	red	No information available						
	Odour/odour threshold:	ethanol like/no information available	No information available						
	Melting point / freezing point:	No information available	No information available						



Page 8 of 17

Trading name:	GRAM SAFRANIN SOLUTION						
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6		

	Boiling point or initial boiling point and boiling range:	No information available	No information available		
	Flammability:	No information available	No information available		
	Lover and upper explosion limit:	No information available	No information available		
	Flash point:	49 °C	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		
9.2	Other information				
	-				

SECTIO	SECTION 10. Stability and reactivity					
10.1	Reactivity:	See Section 10.5.				
10.2	Chemical stability:	Stable within normal temperature and general work conditions.				
10.3	Possibility of hazardous reactions:	See Section 10.5.				
10.4	Conditions to avoid:	Keep away from heat, sparks, open flames, strong heating and ignition sources. No smoking.				
10.5	Incompatible materials:	Strong oxidizing agents (inorganic strong acid, nitric acid, perchlorates, peroxy compounds, perchloric acid, permanganates etc.), alkali metals, alkali earth metals.				
10.6	Hazardous decomposition products:	Carbon monoxide and carbon dioxide.				

SECTION 11. Toxicological information										
11.1 Inform	Information on hazard classes as defined in Regulation (EC) No 1272/2008									
Acute toxicity:										
Route of exposure:	Method	Species	Dose LD ₅₀ /LC ₅₀ or ATE _{mix}	Exposure time	Results					
Oral:	-	rat (ethanol)	LD ₅₀	_	7.060 mg/kg					
Dermal:	-	rabbit (ethanol)	LD ₅₀	_	>20.000 mg/l					



Page 9 of 17

Trading name:	GRAM SAFRANIN SOLUTION									
Product code:	G	SF-OT-X**	Re	evision	date:	23 Dec 2	2022	Versi	ion:	6
Inhalation:		-	rat (ethanol)		LC ₅₀		4 h	2	>8.000 m	ng/l
Specific	c targe	t organ toxicit	y – single expo	osure (S	TOT SE):					
, - I			ific effects			Target orga	n	Note		
Oral:	١	lo information			No info	rmation avail				
Dermal:	٨	lo information	available		No info	rmation avail	able -	•		
Inhalation:	١	lo information	available		No info	rmation avail	able -			
Aspirat	ion ha	zard:	N	lo infori	mation av	vailable.				
<u> </u>			<u> </u>							
Irritatio	n and	corrosion								
		Exposur	e time	Spec	ies	Evaluation	Method		Note	
Skin corrosion/irritat	ion:	-	-			-	-	-		
Serious eye damage/irritatio	on	-	-			-	-	-		
Sensitiz			• .• •							
Skin sensitizatio			ormation avai							
Respiratory sens	sitizatio	on: No Int	ormation avai	labie.						
Sympto	oms re	lated to the pl	nysical, chemic	al and t	oxicoloa	ical character	istics			
Oral exposure:		Absorption unconscious	of great conness and alcohy y occur. Repea	quantitie nol poise	es may oning. In o	cause dizz	ziness, drun wing great q		nausea a	
Dermal exposur	e:	After prolon cracking of s	ged or repea kin.	ited exp	oosure s	ymptoms ma	ay include: d	lefatting,	dryness	and
Inhalation expo	sure:	Inhalation of membranes.	great quantiti	antities may cause dizziness, euphoria and mild irritation of the mucous						
Eye exposure:	May cause ir	ritation and re	nd redness.							
Repeat	ed dos	se toxicity (sub	acute, subchro	onic, ch	ronic)	1			i	
		Dose	Exposure time	Speci	es	Method	Evaluatio	on	Note	
Subacute oral	No avai	information lable	No information available	No inforr availa	nation ble	No information available	No infor available		_	



Page 10 of 17

Trading name:		GRAM SAFRAN	IN SOLUTION		
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

			·····	- y				
Subacute dermal	No availa	information able	No information available	No information available	No information available	No inforn available	nation	-
Subacute inhalation	No availa	information able	No information available	No information available	No information available	No inforn available	nation	-
Subchronic oral	No availa	information able	No information available	No information available	No information available	No inforn available	nation	-
Subchronic dermal	No availa	information able	No information available	No information available	No information available	No inforn available	nation	-
Subchronic inhalation	No availa	information able	No information available	No information available	No information available	No inforn available	nation	-
Chronic oral	No availa	information able	No information available	No information available	No information available	No inforn available	nation	-
Chronic dermal	No availa	information able	No information available	No information available	No information available	No inforn available	nation	-
Chronic inhalation	No availa	information able	No information available	No information available	No information available	No inforn available	nation	-
Specific	target	organ toxicit	· · ·	xposure (STOT				
Subacute oral		No informa	Specific effection available	ts	Target o		_	Note
Subacute derma			ation available		No information		_	
Subacute inhalat			ation available		No information available -		_	
Subchronic oral			tion available		No information available -		_	
Subchronic derm	nal	No informa	ntion available		No information	n available	-	
Subchronic inhal	ation	No informa	ntion available		No information	n available	-	
Chronic oral		No informa	ntion available		No information	n available	-	
Chronic dermal		No informa	ntion available		No information	n available	-	
Chronic dermai	n		ition available		No information	ماطوانورو	_	



Page 11 of 17

Trading name:		GRAM SAFRAN	IN SOLUTION		
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

	Mutagenicity in vitro:	Bas	sed on available data, the classification criteria are not met.	
	Genotoxicity:	Bas	sed on available data, the classification criteria are not met.	
	Mutagenicity in vivo:	Bas	sed on available data, the classification criteria are not met.	
	Germ cell mutagenicity:	Bas	sed on available data, the classification criteria are not met.	
	Reproductive toxicity:	Bas	sed on available data, the classification criteria are not met.	
	Summary of evaluation of the CN properties:	ЛR	Based on available data, the classification criteria are not met.	
11.2	Information on other hazards:			
11.2.1.	Endocrine disrupting properties:			
	Based on available data, does not contain endocrine disruptors.			
11.2.2.	Other informations:			
	-			

SECTION 12. Ecologi	cal informat	ion				
12.1 Toxicity						
Acute (short-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	golden orf	No information available	8.140 mg/l /48 h (ethanol)	-
Crustacea:	EC ₅₀	48 hours	daphnia magna	No information available	7.800 mg/l (ethanol)	-
Algae/aquatic plants	IC ₅₀	4 days	algae	No information available	5.000 mg/l / 7d (ethanol)	-
Other organisms	-	-	-	-	-	-
Chronic (long-term) toxicity	Dose	Exposure time	Species	Method	Evaluation	Note
Fish	LC ₅₀	96 hours	No information available	No information available	No information available	-
Crustacea:	EC ₅₀	48 hours	No information available	No information available	No information available	-



Trading name:

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

GRAM SAFRANIN SOLUTION

Page 12 of 17

Product code:	: (GSF-OT-X**		Re	evision date:	23 Dec 20	22	Versic	n:	6
Algae/aquatic p	olants	IC ₅₀	72 hours		lo information vailable	No information available	No inform available	nation	_	
Other organism	าร	-	-	-		-	-		-	
2.2 Persist	ence a	and degradal	oility							
Abioti	c degr	adation				1	-			
	De	egradation h	alf-lives		Method	Evaluatio	n	No	te	
Marine water	No i	information a	n availahle		nformation able	No informatio available	n -			
resh water	No i	information a	ation available		nformation able	No informatio available	n -			
\ir	No i	information a	nation available		nformation able	No informatio available	n -			
Soil	No information available		No i avail	nformation able	No information available					
Biodeg										
% Degradation No information vailable	on	Time (days) formation		Method nformation lable	Evaluatio No informatio available	n No	No informat ailable		
% Degradation vailable 2.3 Bioacc	cumula	Time (on the second sec	formation	avail	nformation lable	No informatio available	n No	o informat ailable	ion	
% Degradation vailable 2.3 Bioacc	cumula	Time (in available	formation I coefficient (avail	nformation lable ow) Method	No informatio available	n No	o informat ailable		
% Degradation Vailable 2.3 Bioacc	cumula ol-wat	Time (on the second sec	formation I coefficient (avail	nformation lable	No informatio available	n No	o informat ailable	ion	
% Degradation vailable 2.3 Bioacc Octano Value	cumula ol-wat	Time (contraction concentration	nl coefficient (avail	nformation lable ow) Method	No informatio available	n No	o informat ailable	ion	
% Degradation vailable 2.3 Bioacc Octano	cumula ol-wat	Time (on the second sec	formation Il coefficient (pH -	avail	nformation lable ow) Method	No informatio available	ation No	o informat ailable N	ion	



Page 13 of 17

Trading name:		GRAM SAFRAI	NIN SOLUTION		
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

	Chroni	c ecoto	xicity							
	Value		Dose	Exposure time	Spe	ecies	Metho	od E	valuation	Note
Chroni	c toxicity	on fish	LC ₅₀	No information available	No inforr availa	mation	No informa available		ormation ailable	-
	c toxicity cea (<i>Daph</i>		EC ₅₀	No information available	No inforr availa	mation	No informa available		ormation ailable	-
12.4	Mobilit	y in soi	il							
12.4			dicted distributi	on in onvironm	ontal c	ompartm	onts:			
		······································	n available	OII III EIIVII OIIIII	ental C	.ompartif	ients.			
	Surface									
	Val		°C	Concentra	tion		Method	٦		Note
	No	ue	No	Concentra	uon		ivietilot	ı		note
	informa availab		information available			No info	i _		-	
	<u> </u>		desorption D coefficient							N
Transp	ort	Hen	ry's constant	log Kow	ΕV	/aporatio	n rate	Metl	100	Note
Soil-wa	ater	No availa	information able	No information		o informa railable	ition	No inforr available	nation	-
Water-	air	No availa	information able	No information		n No information available		No information available		-
Soil-air	No information available		No information		o informa railable	ition	No inforr available	mation	-	
12.5	Results	of PBT	and vPvB asses	ssment						
5			lable data, the p		ot cont	ain any P	BT or vP	vB substa	nces.	
12.6.	Endocr	ine disi	rupting properti	ies						
	Docad	an avai	labla data daga	not contain en	docrin	o dicrupt	orc			



Page 14 of 17

Trading name:		GRAM SAFRAN	IN SOLUTION		
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

12.7.	Other adverse effects	
	Do not let the product or it	s residues reach sewer system, waterways and soil.
·		
SECTIO	N 13. Disposal consideration	ons
13.1	Waste treatment method	s
13.1.1.	Product/Packaging dispo	sal:
	Submit for disposal to the Protection.	e legal person authorized by the Ministry of Environmental and Nature
13.1.2.	Waste codes/waste desig	nations according to Law:
	Packaging that contains r	esidual 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.
	1	
13.1.5.	Other disposal recommer	
	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. Unused product residues may be
13.1.6.	Relevant Community pro	visions:
	Disposal must be made a	ccording to official regulations.
	•	
SECTIO	N 14 TRANSPORT INFORM	IATION
	Transporting/shipment by	road (ADR)
UN num	nber:	1170
UN prop	per shipping name:	Ethanol solution
Transpo	rt hazard class(es):	3
Packing	group:	III
Environi	mentally hazardous:	-
Special	precautions for user:	-
	Transporting/shipment by	rail (RID)
UN num	nber:	1170



Page 15 of 17

Trading name:		GRAM SAFRAN	IN SOLUTION		
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-
Inland waterway transport	(ADN)
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-
Transporting/shipment by	sea (IMDG)
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	lii e
Environmentally hazardous:	-
Special precautions for user:	-
Transport in bulk according to Anof MARPOL 73/78 and the IBC code	-
Transporting/shipment by	air (ICAO-TI/IATA-DGR)
UN number:	1170
UN proper shipping name:	Ethanol solution
Transport hazard class(es):	3
Packing group:	III
Environmentally hazardous:	-
Special precautions for user:	-
Further information: volume IATA: Sp	ecial Provision 144 – An aqueous solution containing 24% or less alcohol by is not subject to classification. ecial Provision A58 - An aqueous solution containing 24% or less alcohol by is not subject to classification.

SECTION 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture



Page 16 of 17

Trading name:	GRAM SAFRANIN SOLUTION				
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

	EU regulations			
	Authorization and/or rest	rictions 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; COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).		
	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	nt		
	None			

SECTION 16. Other information	
16.1 Indication of changes:	-



Page 17 of 17

Trading name:	GRAM SAFRANIN SOLUTION				
Product code:	GSF-OT-X**	Revision date:	23 Dec 2022	Version:	6

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 used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP)			
Classifi	cation	Classification procedure		
_		-		
16.5.	Relevant H statements (num	ber and full text)		
	H: 225	Highly flammable liquid and vapor.		
	226	Flammable liquid and vapor.		
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: I	Exposure scenario resulting to chemical safety assessment
_	