

# 27/07/2023 1 27/07/2023

# Product name: NZY miRNA Isolation & RNA Clean-up Kit

Catalogue reference(s): MB45801, 50 columns

Components	MB45801	Safety Information
Buffer NMIL	30 mL	See specific MSDS
Buffer NMIPP	20 mL	See specific MSDS
Buffer NMIB	60 mL	See specific MSDS
Buffer NMIMD	25 mL	See specific MSDS
Digestion Buffer	7 mL	Not Hazardous *
rDNAse (lyophilized)	2 vials	See specific MSDS
Buffer NMIW1	35 mL	See specific MSDS
Buffer NMIW2 (concentrate)	12 mL	Not Hazardous *
RNase-free Water	13 mL	Not Hazardous *
NZYSpin Homogenization Filter Columns	50 mL	Not Hazardous *
NZYSpin RNA Columns	50 un	Not Hazardous *
NZYSpin Protein Removal Columns	50 un	Not Hazardous *
Collection Tubes (1.5 mL)	50 un	Not Hazardous *
Collection Tubes (2 mL)	50 un	Not Hazardous *
Collection Tubes (2 mL, lid)	150 un	Not Hazardous *

\*The component mentioned above is not classified as hazardous according to CLP regulation (EC) No 1272/2008. Consequently, does not require a Material Safety Data Sheet (MSDS), according to Regulation (EC) No 1907/2006, emended by Regulation (EU) No 2020/878.



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## MB458 - Buffer NMIL

Date of	compilation: 13/07/2023 Revi	sed: 11/08/2023	Version: 2 (Replaced 1)
SEC	TION 1: IDENTIFICATION OF TH	HE SUBSTANCE/M	IXTURE AND OF THE COMPANY/UNDERTAKING
1.1	Product identifier:	MB458 - Buffe	NMIL
	Other means of identification:		
	Non-applicable		
1.2	Relevant identified uses of the	substance or mixt	ire and uses advised against:
	Relevant uses: Laboratory. For prof	essional users only.	
	Uses advised against: All uses not s	pecified in this section	n or in section 7.3
1.3	Details of the supplier of the sa	fety data sheet:	
	NZYTech Estrada do Paco do Lumiar Campus 1649-038 Lisboa - Lisboa - Portugal info@nzytech.com www.nzytech.com	,	-/c
1.4	Emergency telephone number:		ter (Portugal) CIAV: +351 800 250 250; Outside Portugal: Call your ormation Service or call local Life Saving Service.

## SECTION 2: HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture:

## CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Acute Tox. 3: Acute inhalation toxicity, Category 3, H331 Acute Tox. 4: Acute toxicity, Category 4, H302+H312 Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard, Category 3, H412 Skin Corr. 1: Skin corrosion, Category 1, H314

## 2.2 Label elements:

## CLP Regulation (EC) No 1272/2008:

Labelling of packages where the contents do not exceed 125 ml:

Danger



## Hazard statements:

Acute Tox. 3: H331 - Toxic if inhaled. Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects. Skin Corr. 1: H314 - Causes severe skin burns and eye damage.

## **Precautionary statements:**

P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

## Supplementary information:

EUH208: Contains 2-mercaptoethanol. May produce an allergic reaction.

## Substances that contribute to the classification

guanidinium thiocyanate; 2-mercaptoethanol

## **Authorized substances:**

guanidinium thiocyanate (01-2120735072-65-0001)

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Date of compilation: 13/07/2023 Revised: 11/08/2023 Version: 2 (Replaced 1) SECTION 2: HAZARDS IDENTIFICATION (continued) 2.3 Other hazards: Product does not meet PBT/vPvB criteria Endocrine-disrupting properties: The product does not meet the criteria. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS 3.1 Substance: Non-applicable 3.2 Mixture: Chemical description: Mixture of substances Components: In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains: Chemical name/Classification Identification Concentration CAS: 593-84-0 guanidinium thiocyanate(1) Self-classified EC: 209-812-1 45 - <60 % Index: 615-030-00-5 Regulation 1272/2008 Acute Tox. 4: H302+H312+H332; Aquatic Chronic 3: H412; Skin Corr. 1: H314 - Danger 🌾 REACH: Non-applicable CAS: 60-24-2 2-mercaptoethanol<sup>(1)</sup> Self-classified 200-464-6 FC: 0,1 - <1 % Non-applicable Acute Tox. 1: H330; Acute Tox. 2: H310; Acute Tox. 3: H301; Aquatic Chronic 1: Index Regulation 1272/2008 REACH: Non-applicable H410; Eye Dam. 1: H318; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Danger <sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878 To obtain more information on the hazards of the substances consult sections 11, 12 and 16. Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acu	te toxicity	Genus
guanidinium thiocyanate	LD50 oral	500 mg/kg (ATEi)	
CAS: 593-84-0	LD50 dermal	1100 mg/kg (ATEi)	
EC: 209-812-1	LC50 inhalation	11 mg/L (ATEi)	
2-mercaptoethanol	LD50 oral	100 mg/kg (ATEi)	
CAS: 60-24-2	LD50 dermal	50 mg/kg (ATEi)	
EC: 200-464-6	LC50 inhalation	0,05 mg/L (ATEi)	

## SECTION 4: FIRST AID MEASURES

## 4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

## By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

## By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

## By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

## By ingestion/aspiration:



Safety data sheet legislation

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Date of compilation: 13/07/2023 Revised: 11/08/2023 Version: 2 (Replaced 1) SECTION 4: FIRST AID MEASURES (continued)

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

## 4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

Indication of any immediate medical attention and special treatment needed: 4.3

Non-applicable

## SECTION 5: FIREFIGHTING MEASURES

## 5.1 Extinguishing media:

## Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

## Unsuitable extinguishing media:

Non-applicable

## 5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

## 5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

## Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

## Personal precautions, protective equipment and emergency procedures: 6.1

## For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

## For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

## 6.2 **Environmental precautions:**

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

## Methods and material for containment and cleaning up: 6.3

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

## **Reference to other sections:** 6.4

See sections 8 and 13.

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Date of compilation: 13/07/2023 Revised: 11/08/2023 Version: 2 (Replaced 1) SECTION 7: HANDLING AND STORAGE 7.1 Precautions for safe handling: A.- General precautions for safe use Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used. B.- Technical recommendations for the prevention of fires and explosions Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided. C.- Technical recommendations on general occupational hygiene Do not eat or drink during the process, washing hands afterwards with suitable cleaning products. D.- Technical recommendations to prevent environmental risks Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity. 7.2 Conditions for safe storage, including any incompatibilities: A.- Technical measures for storage Store in a cool, dry, well-ventilated location B.- General conditions for storage Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5 7.3 Specific end use(s): Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION 8.1 **Control parameters:** 

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

There are no applicable occupational exposure limits for the substances contained in the product

**DNEL (Workers):** 

Non-applicable

## DNEL (General population):

Non-applicable

PNEC:

Non-applicable

## 8.2 **Exposure controls:**

A.- Individual protection measures, such as personal protective equipment

In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 2016/425/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services

as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

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	CONTROLS/PERSONA	L PROTECTI	ON (cont	inued)		
Pictogram	PPE	Labelling	CEN	Standard		Remarks
Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2	2002+A1:2010	c.	place when there is a taste or smell of th ontaminant inside the face mask. If the contaminant comes with warnings it is commended to use isolation equipment.
C Specific protectio	n for the hands		•			
Pictogram	PPE	Labelling	CEN	Standard		Remarks
Mandatory hand protection	NON-disposable chemical protective gloves		EN 16523-1	-1:2016+A1:2018 1:2015+A1:2018 • 21420:2020	manufa the p	he Breakthrough Time indicated by the acturer must exceed the period during w roduct is being used. Do not use protect ms after the product has come into conta with skin.
	d has therefore to be che				rial car	n not be calculated in advance wi
Pictogram	PPE	Labelling	CEN	Standard		Remarks
Mandatory face protection	Face shield		EN EN	166:2002 167:2002 168:2002 0 4007:2018		daily and disinfect periodically according anufacturer 's instructions. Use if there i risk of splashing.
E Body protection			<u>!</u>			
Pictogram	PPE	Labelling	CEN	Standard		Remarks
Mandatory complete body protection	Disposable clothing for protection against chemical risks		EN 1 EN 1 1:200 EN ISC EN ISC	:2005+A1:2009 168:2002 SO 13982- 04/A1:2010 D 6529:2013 D 6530:2005 464:1994		r professional use only. Clean periodically ording to the manufacturer's instructions
	Safety footwear for	CE	EN ISO	20345:2011	Re	place boots at any sign of deterioration.
Mandatory foot protection	protection against chemical risk	CATI	EN 13	832-1:2019		prace boots at any sign of detenoration.
	risk	CAT III	EN 13	832-1:2019		place boots at any sign of deterioration.
protection	risk ency measures	CAT III andards		832-1:2019 Emergency measu		Standards
F Additional emerg	asure Sta ISO 3864-1:20	CAT III andards 5I Z358-1 11, ISO 3864-4:20			re	Standards DIN 12 899
F Additional emergency me Emergency me Emergency sh	risk ency measures asure Sta ANS ISO 3864-1:202 ower	5I Z358-1		Emergency measure	re	Standards DIN 12 899
F Additional emergency me Emergency me Emergency shi Environmental exp In accordance with t spillage of both the p	risk ency measures asure Sta ISO 3864-1:20 power bosure controls: the community legislation product and its container.	51 Z358-1 11, ISO 3864-4:20 for the protecti	111	Emergency measure Eyewash stations environment it is	re 5 5 recoi	Standards DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011 mmended to avoid environmenta
F Additional emerge Emergency me Emergency sh Emergency sh Environmental exp In accordance with the spillage of both the p Volatile organic co	risk ency measures asure Sta ISO 3864-1:20 ower bosure controls: the community legislation to product and its container. mpounds:	51 Z358-1 11, ISO 3864-4:20 for the protecti For additional i	111	Emergency measure Eyewash stations Environment it is a see subsection	re 5 5 recoi	Standards DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011 mmended to avoid environmental
F Additional emerge Emergency me Emergency shi Emergency shi Environmental exp In accordance with ti spillage of both the p Volatile organic co With regard to Direct	risk ency measures asure Sta ISO 3864-1:20 ower bosure controls: he community legislation product and its container. mpounds: tive 2010/75/EU, this proc	5I Z358-1 11, ISO 3864-4:20 for the protecti For additional i duct has the fol	111	Emergency measure Eyewash stations Environment it is a see subsection	re 5 5 recoi	Standards DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011 mmended to avoid environmental
F Additional emerge Emergency me Emergency sh Emergency sh Environmental exp In accordance with the spillage of both the p Volatile organic co	risk ency measures asure Sta ANS ISO 3864-1:20: bosure controls: the community legislation for oroduct and its container. mpounds: tive 2010/75/EU, this proc 0 % v	51 Z358-1 11, ISO 3864-4:20 for the protecti For additional i	111	Emergency measure Eyewash stations Environment it is a see subsection	re 5 5 recoi	Standards DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011 mmended to avoid environmental

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SECT	TION 9: PHYSICAL AND CHEMICAL PROPERTIES	5
9.1	Information on basic physical and chemical pro	perties:
	For complete information see the product datasheet.	
	Appearance:	
	Physical state at 20 °C:	Liquid
	Appearance:	Not available
	Colour:	Colourless
	Odour:	Not available
	Odour threshold:	Non-applicable *
	Volatility:	
	Boiling point at atmospheric pressure:	100 °C
	Vapour pressure at 20 °C:	2350 Pa
	Vapour pressure at 50 °C:	12381,01 Pa (12,38 kPa)
	Evaporation rate at 20 °C:	Non-applicable *
	Product description:	
	Density at 20 °C:	1012,6 kg/m³
	Relative density at 20 °C:	1,013
	Dynamic viscosity at 20 °C:	2,56 cP
	Kinematic viscosity at 20 °C:	2,53 mm²/s
	Kinematic viscosity at 40 °C:	Non-applicable *
	Concentration:	Non-applicable *
	pH:	7
	Vapour density at 20 °C:	Non-applicable *
	Partition coefficient n-octanol/water 20 °C:	Non-applicable *
	Solubility in water at 20 °C:	Non-applicable *
	Solubility properties:	Non-applicable *
	Decomposition temperature:	Non-applicable *
	Melting point/freezing point:	Non-applicable *
	Flammability:	
	Flash Point:	Non Flammable (>60 °C)
	Flammability (solid, gas):	Non-applicable *
	Autoignition temperature:	Non-applicable *
	Lower flammability limit:	Non-applicable *
	Upper flammability limit:	Non-applicable *
	Particle characteristics:	
	Median equivalent diameter:	Non-applicable
9.2	Other information:	
	Information with regard to physical hazard clas	
	Explosive properties:	Non-applicable *
	Oxidising properties:	Non-applicable *
	Corrosive to metals:	Non-applicable *
	Heat of combustion:	Non-applicable *
	Aerosols-total percentage (by mass) of flammable components: Other safety characteristics:	Non-applicable *
	*Not relevant due to the nature of the product, not providing info	rmation property of its bazards
	not relevant due to the nature of the product, not providing info	mauon property of its hazarus.

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SECT	TON 9: PHYSICAL AND (	HEMICAL PROPERTIE	S (continued)		
	Surface tension at 20 °C:		Non-applicable *		
	Refraction index:		Non-applicable *		
	*Not relevant due to the nature o	f the product, not providing info	ormation property of its hazard	S.	
SECT	ION 10: STABILITY AND	REACTIVITY			
10.1	Reactivity:				
	No hazardous reactions are	expected because the pro-	oduct is stable under reco	ommended storage condition	tions. See section 7.
10.2	Chemical stability:				
	Chemically stable under the	indicated conditions of st	torage, handling and use.		
10.3	Possibility of hazardous	reactions:			
	Under the specified condition	ons, hazardous reactions t	hat lead to excessive terr	peratures or pressure ar	e not expected.
10.4	Conditions to avoid:				
	Applicable for handling and	storage at room tempera	ture:		
	Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
10.5	Incompatible materials:				
	Acids	Water	Oxidising materials	Combustible materials	Others
	Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases
10.6	Hazardous decomposition	on products:			
	See subsection 10.3, 10.4 a				
	complex mixtures of chemic	al substances can be rele	eased: carbon dioxide (CC	<ol> <li>carbon monoxide and</li> </ol>	d other organic compounds
SECT	ION 11: TOXICOLOGICA	L INFORMATION			
11.1	Information on hazard o	lasses as defined in Re	gulation (EC) No 1272	2/2008:	
	The experimental information	on related to the toxicolog	jical properties of the pro	duct itself is not available	2
	Dangerous health implic	ations:			
	In case of exposure that is adverse effects on health m A- Ingestion (acute effect)	ay result, depending on t		nan the recommended oc	cupational exposure limits,
	vomiting. - Corrosivity/Irritability	onsumption of a considera :: Corrosive product, if it is skin contact see section 2	s swallowed causes burns		inal pain, nausea and <sup>-</sup> or more information abou

B- Inhalation (acute effect):

- Acute toxicity : Inhalation after prolonged exposure may be lethal.

- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.

- Contact with the eyes: Produces serious eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

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TION 11: TOXICOLOGIC	AL INFORMATION (contin	ued)			
as hazardous for the ef IARC: Non-applicable - Mutagenicity: Based hazardous for this effec - Reproductive toxicity	ed on available data, the class fects mentioned. For more inf on available data, the classifie t. For more information see s :: Based on available data, the for this effect. For more infor	ormation see section 3. cation criteria are not met ection 3. e classification criteria are	as it do	oes not contain substan	ces classified a
hazardous with sensitis - Skin: Based on avail dangerous with sensitis	on available data, the classificating effects. For more informate able data, the classification cr ing effects. For more information xicity (STOT) - single exposure	tion see section 3. iteria are not met. Howev tion see section 3.			
this effect. For more in	a, the classification criteria are formation see section 3. xicity (STOT)-repeated expos		ontain su	Ibstances classified as h	azardous for
it does not contain sub - Skin: Based on avail	toxicity (STOT)-repeated exp stances classified as hazardou able data, the classification cr t. For more information see s	s for this effect. For more iteria are not met, as it do	informat	tion see section 3.	
	, the classification criteria are formation see section 3.	e not met, as it does not co	ontain su	ıbstances classified as h	azardous for
Non-applicable Specific toxicology info	mation on the substances	:			
	Identification		A	Acute toxicity	Genus
guanidinium thiocyanate		LD50 ora	I	500 mg/kg (ATEi)	
CAS: 593-84-0		LD50 de	mal	1100 mg/kg (ATEi)	
EC: 209-812-1		LC50 inh	alation	11 mg/L (ATEi)	
2-mercaptoethanol		LD50 ora	I	100 mg/kg (ATEi)	
CAS: 60-24-2		LD50 de	mal	50 mg/kg (ATEi)	
EC: 200-464-6		LC50 inh	alation	0,05 mg/L (ATEi)	
Acute Toxicity Estimate	(ATE mix):				
	ATE mix			Ingredient(s) of unknow	vn toxicity
Oral	781,86 mg/kg (Calculati	on method)	0 %	,	•

## Inhalation 3,97 mg/L (4 h) (Calculation method) 11.2 Information on other hazards:

## **Endocrine disrupting properties**

Endocrine-disrupting properties: The product does not meet the criteria.

## **Other information**

Non-applicable

Dermal

# SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

1361,72 mg/kg (Calculation method)

0 %

0 %

## 12.1 Toxicity:

# Acute toxicity:

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					1
	Identification		Concentration	Species	Genus
	guanidinium thiocyanate	LC50	>10 - 100 mg/L (96 h)		Fish
	CAS: 593-84-0	EC50	>10 - 100 mg/L (48 h)		Crustacean
	EC: 209-812-1	EC50	>10 - 100 mg/L (72 h)		Algae
	2-mercaptoethanol	LC50	>0.1 - 1 mg/L (96 h)		Fish
	CAS: 60-24-2	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
	EC: 200-464-6 Persistence and degradability:	EC50	>0.1 - 1 mg/L (72 h)		Algae
12.3	<b>Bioaccumulative potential:</b> Not available				
12.4	Not available <b>Mobility in soil:</b> Not available				
	Not available Mobility in soil: Not available				
12.4	Not available <b>Mobility in soil:</b> Not available				
L2.4 L2.5	Not available Mobility in soil: Not available Results of PBT and vPvB assessment:				
L2.4	Not available <b>Mobility in soil:</b> Not available <b>Results of PBT and vPvB assessment:</b> Product does not meet PBT/vPvB criteria	ot meet t	he criteria.		
L2.4 L2.5	Not available <b>Mobility in soil:</b> Not available <b>Results of PBT and vPvB assessment:</b> Product does not meet PBT/vPvB criteria <b>Endocrine disrupting properties:</b> Endocrine-disrupting properties: The product does not	ot meet t	he criteria.		

# SECTION 13: DISPOSAL CONSIDERATIONS

## **13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

## Type of waste (Regulation (EU) No 1357/2014):

HP14 Ecotoxic, HP8 Corrosive, HP6 Acute Toxicity

## Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

## **Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

## SECTION 14: TRANSPORT INFORMATION

## Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:



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ECTION 14: TRANSPORT	TNEODMATION (continued)	
	INFORMATION (Continued)	
14. 14. 14. 14. 14. 14. 14.	<ol> <li>UN number or ID number:</li> <li>UN proper shipping name:</li> <li>Transport hazard class(es): Labels:</li> <li>Packing group:</li> <li>Environmental hazards:</li> <li>Special precautions for user Special regulations: Tunnel restriction code: Physico-Chemical properties: Limited quantities:</li> <li>Maritime transport in bulk according to IMO</li> </ol>	UN2922 CORROSIVE LIQUID, TOXIC, N.O.S. (guanidinium thiocyanate) 8 8, 6.1 II No 274 E see section 9 1 L Non-applicable
	instruments:	
Transport of dange	<b>-</b> <i>i</i>	
With regard to IMDG 4	1 UN number or ID number:	UN2922
	2 UN proper shipping name:	CORROSIVE LIQUID, TOXIC, N.O.S. (guanidinium thiocyanate)
<i>i</i> / \\ <i>i</i> / \\	3 Transport hazard class(es):	8
8 6	Labels:	8, 6.1
	4 Packing group:	II
	5 Marine pollutant:	No
14.	6 Special precautions for user Special regulations:	274
	EmS Codes:	274 F-A, S-B
	Physico-Chemical properties:	see section 9
	Limited quantities:	1 L
	Segregation group:	Non-applicable
14.	7 Maritime transport in bulk	Non-applicable
	according to IMO	
Tuppersut of deserves	instruments:	
Transport of dange		
With regard to IATA/I		
14.	<ol> <li>UN number or ID number:</li> <li>UN proper shipping name:</li> <li>Transport hazard class(es):</li> </ol>	UN2922 CORROSIVE LIQUID, TOXIC, N.O.S. (guanidinium thiocyanate) 8
1 /	Labels: 4 Packing group:	8, 6.1 II
	5 Environmental hazards:	No
	6 Special precautions for user	
	Physico-Chemical properties:	see section 9
14.	7 Maritime transport in bulk according to IMO instruments:	Non-applicable

# SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable Article 95, REGULATION (EU) No 528/2012: Non-applicable

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Date of compilation: 13/07/2023 Revised: 11/08/2023 Version: 2 (Replaced 1) SECTION 15: REGULATORY INFORMATION (continued) REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable Seveso III: Lower-tier Upper-tier Section Description requirements requirements H2 ACUTE TOXIC 200 50 Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....): Shall not be used in: -ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, -tricks and jokes, -games for one or more participants, or any article intended to be used as such, even with ornamental aspects. Specific provisions in terms of protecting people or the environment: It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product. Other legislation: The product could be affected by sectorial legislation 15.2 Chemical safety assessment: The supplier has not carried out evaluation of chemical safety. SECTION 16: OTHER INFORMATION Legislation related to safety data sheets: The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878). Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.: Non-applicable Texts of the legislative phrases mentioned in section 2: H412: Harmful to aquatic life with long lasting effects. H314: Causes severe skin burns and eye damage. H302+H312: Harmful if swallowed or in contact with skin. H331: Toxic if inhaled. Texts of the legislative phrases mentioned in section 3: The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3 CLP Regulation (EC) No 1272/2008: Acute Tox. 1: H330 - Fatal if inhaled. Acute Tox. 2: H310 - Fatal in contact with skin. Acute Tox. 3: H301 - Toxic if swallowed. Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled. Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects. Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects. Eye Dam. 1: H318 - Causes serious eye damage. Skin Corr. 1: H314 - Causes severe skin burns and eye damage. Skin Irrit. 2: H315 - Causes skin irritation. Skin Sens. 1: H317 - May cause an allergic skin reaction. Classification procedure: Aquatic Chronic 3: Calculation method Skin Corr. 1: Calculation method Acute Tox. 4: Calculation method Acute Tox. 3: Calculation method Advice related to training: Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product. Principal bibliographical sources: - CONTINUED ON NEXT PAGE -Date of compilation: 13/07/2023 Revised: 11/08/2023 Version: 2 (Replaced 1) Page 11/12

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SECTION 16: OTHER INFORMA	ATION (continued)	
http://echa.europa.eu		
http://eur-lex.europa.eu		
Abbreviations and acrony	ms:	
ADR: European agreement c	oncerning the international (	carriage of dangerous goods by road
IMDG: International maritime	e dangerous goods code	
IATA: International Air Trans	port Association	
ICAO: International Civil Avia	ition Organisation	
COD: Chemical Oxygen Dem		
BOD5: 5day biochemical oxy	gen demand	
BCF: Bioconcentration factor		
LD50: Lethal Dose 50		
LC50: Lethal Concentration 5	•	
EC50: Effective concentration		
LogPOW: Octanolwater parti		
Koc: Partition coefficient of c		
UFI: unique formula identifie		
IARC: International Agency f	or Research on Cancer	

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

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## MB458 - Buffer NMIPP

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: MB458 - Buffer NMIPP

## Other means of identification:

Non-applicable

## Relevant identified uses of the substance or mixture and uses advised against: 1.2

Relevant uses: Laboratory. For professional users only.

Uses advised against: All uses not specified in this section or in section 7.3

## Details of the supplier of the safety data sheet: 1.3

NZYTech

Estrada do Paco do Lumiar Campus do Lumiar - Edif. E, r/c 1649-038 Lisboa - Lisboa - Portugal info@nzytech.com www.nzytech.com

Emergency telephone number: National Poison Center (Portugal) CIAV: +351 800 250 250; Outside Portugal: Call your 1.4 regional Poisons Information Service or call local Life Saving Service.

## SECTION 2: HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture:

## CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411 Eye Dam. 1: Serious eye damage, Category 1, H318 Skin Corr. 1: Skin corrosion, Category 1, H314

## 2.2 Label elements:

## CLP Regulation (EC) No 1272/2008:

Labelling of packages where the contents do not exceed 125 ml:



## Hazard statements:

Skin Corr. 1: H314 - Causes severe skin burns and eye damage.

## **Precautionary statements:**

## P264: Wash thoroughly after handling.

P280: Wear protective gloves/face protection/protective clothing/protective footwear.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a poison center/doctor.

## Substances that contribute to the classification

zinc chloride

## 2.3 Other hazards:

Product does not meet PBT/vPvB criteria Endocrine-disrupting properties: The product does not meet the criteria.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

## 3.1 Substance:

Non-applicable

Safety data sheet legislation

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

#### 3.2 Mixture:

Chemical description: Mixture of substances

## **Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

	Identification		Chemical name/Classification				
CAS:		zinc chloride <sup>(1)</sup>	Self-classified				
EC: Index: REACH:	231-592-0 Non-applicable Non-applicable	Regulation 1272/2008	Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Dam. 1: H318; Skin Corr. 1: H314; STOT SE 3: H335 - Danger	5 - <10 %			

<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acut	Genus	
zinc chloride	LD50 oral	500 mg/kg (ATEi)	
CAS: 7646-85-7	LD50 dermal	Non-applicable	
EC: 231-592-0	LC50 inhalation	Non-applicable	

## SECTION 4: FIRST AID MEASURES

## **Description of first aid measures:** 4.1

Request medical assistance immediately, showing the SDS of this product.

## By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

## By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

## By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

## By ingestion/aspiration:

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

## Most important symptoms and effects, both acute and delayed: 4.2

Acute and delayed effects are indicated in sections 2 and 11.

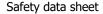
## 4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

## SECTION 5: FIREFIGHTING MEASURES

## 5.1 **Extinguishing media:**

## Suitable extinguishing media:



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## SECTION 5: FIREFIGHTING MEASURES (continued)

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

## Unsuitable extinguishing media:

Non-applicable

## 5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

## 5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

## **Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

## 6.1 Personal precautions, protective equipment and emergency procedures:

## For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

## For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

## 6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

## 6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

## 6.4 Reference to other sections:

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

## 7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

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# SECTION 7: HANDLING AND STORAGE (continued)

## 7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Store in a cool, dry, well-ventilated location

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

## 7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

There are no applicable occupational exposure limits for the substances contained in the product

## **DNEL (Workers):**

Non-applicable

## **DNEL (General population):**

Non-applicable

## PNEC:

Non-applicable

## 8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

## B.- Respiratory protection

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

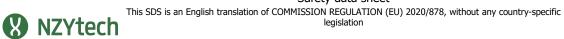
C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory hand protection	NON-disposable chemical protective gloves		EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN ISO 21420:2020	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

## D.- Eye and face protection

	Pictogram	PPE	Labelling	CEN Standard	Remarks
	Mandatory face protection	Face shield	CAT II	EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer 's instructions. Use if there is a risk of splashing.
E	Body protection				



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	N 8: EXPOSURE	CONTR	OLS/PERSONA	AL PROTECT	ION (c	continued)		
	Pictogram		PPE	Labelling		CEN Standard		Remarks
	Mandatory complete body protection		able clothing for n against chemical risks	CAT III	E	3034:2005+A1:2009 EN 168:2002 EN ISO 13982- 1:2004/A1:2010 N ISO 6529:2013 N ISO 6530:2005 EN 464:1994		r professional use only. Clean periodically ording to the manufacturer's instructions
	Mandatory foot protection		ry footwear for n against chemical risk			N ISO 20345:2011 EN 13832-1:2019	Re	eplace boots at any sign of deterioration.
F	- Additional emerge	ency mea	isures					
	Emergency mea	asure	St	tandards		Emergency measu	ire	Standards
	Emergency sho	ower		SI Z358-1 11, ISO 3864-4:20	011	Eyewash station	s	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011
F	nvironmental exp		ontrols:			·		
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1 II F A P A C O O V B V V V E	Average molecula <b>DN 9: PHYSICAL A</b> <b>Information on bas</b> or complete information <b>or complete information</b> <b>or complete information</b> <b>or complete information</b> <b>or complete information</b> <b>or complete information</b> <b>oppearance:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b>olour:</b> <b></b>	AND CH sic phys ation see C: spheric p 0 °C: 0 °C: 0 °C:	Non-a Non-a EMICAL PROP ical and chemi the product data	applicable applicable PERTIES ical propertie asheet. Liqu Not Colc Acet Non 100 235 123	uid availab burless tona n-applica oC 0 Pa 81,01 F	able * Pa (12,38 kPa)		
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SECT	ION 9: PHYSICAL AND CHEMICAL PROPERTIE	S (continued)
	Kinematic viscosity at 40 °C:	Non-applicable *
	Concentration:	Non-applicable *
	pH:	~4 - 4,5
	Vapour density at 20 °C:	Non-applicable *
	Partition coefficient n-octanol/water 20 °C:	Non-applicable *
	Solubility in water at 20 °C:	Non-applicable *
	Solubility properties:	Non-applicable *
	Decomposition temperature:	Non-applicable *
	Melting point/freezing point:	Non-applicable *
	Flammability:	
	Flash Point:	Non Flammable (>60 °C)
	Flammability (solid, gas):	Non-applicable *
	Autoignition temperature:	Non-applicable *
	Lower flammability limit:	Non-applicable *
	Upper flammability limit:	Non-applicable *
	Particle characteristics:	
	Median equivalent diameter:	Non-applicable
9.2	Other information:	
	Information with regard to physical hazard class	sses:
	Explosive properties:	Non-applicable *
	Oxidising properties:	Non-applicable *
	Corrosive to metals:	Non-applicable *
	Heat of combustion:	Non-applicable *
	Aerosols-total percentage (by mass) of flammable components:	Non-applicable *
	Other safety characteristics:	
	Surface tension at 20 °C:	Non-applicable *
	Refraction index:	Non-applicable *
	*Not relevant due to the nature of the product, not providing info	prmation property of its hazards.

# SECTION 10: STABILITY AND REACTIVITY

## 10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

## 10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

# 10.3 Possibility of hazardous reactions:

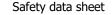
Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

## 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

	Shock and friction Contact with air		Increase in temperature	Sunlight	Humidity
	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
10.5	Incompatible materials	:			
	Acids	Water	Oxidising materials	Combustible materials	Others
	Avoid strong acids	Not applicable	Precaution	Not applicable	Avoid alkalis or strong bases

## **10.6 Hazardous decomposition products:**



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# SECTION 10: STABILITY AND REACTIVITY (continued)

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide ( $CO_2$ ), carbon monoxide and other organic compounds.

## SECTION 11: TOXICOLOGICAL INFORMATION

## 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

## Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.
- B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.

- Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract
- C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.

- Contact with the eyes: Produces serious eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
  - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
  - IARC: Non-applicable
  - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
  - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- E- Sensitizing effects:
  - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
  - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- F- Specific target organ toxicity (STOT) single exposure:

Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

- G- Specific target organ toxicity (STOT)-repeated exposure:
  - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as
  - it does not contain substances classified as hazardous for this effect. For more information see section 3.
  - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

## Other information:

Non-applicable

## Specific toxicology information on the substances:



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# Date of compilation: 13/07/2023 Version: 1 Date of compilation: 13/07/2023 Version: 1 SECTION 11: TOXICOLOGICAL INFORMATION (continued) Identification Acute toxicity Genus Zinc chloride CAS: 7646-85-7 LD50 dermal >2000 mg/kg Genus EC: 231-592-0 LO50 inhalation Non-applicable Colspan="2">Colspan="2"Colspa

## Acute Toxicity Estimate (ATE mix):

	Ingredient(s) of unknown toxicity	
Oral	5555,56 mg/kg (Calculation method)	0 %
Dermal	>2000 mg/kg (Calculation method)	Non-applicable
Inhalation	>20 mg/L (4 h) (Calculation method)	Non-applicable

## 11.2 Information on other hazards:

## Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

## Other information

Non-applicable

# SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

## 12.1 Toxicity:

## Acute toxicity:

Identification	Concentration		Species	Genus
zinc chloride	LC50	>0.1 - 1 mg/L (96 h)		Fish
CAS: 7646-85-7	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
EC: 231-592-0	EC50	>0.1 - 1 mg/L (72 h)		Algae

# 12.2 Persistence and degradability:

Not available

# 12.3 Bioaccumulative potential:

Not available

12.4 Mobility in soil:

Not available

## 12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

## 12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

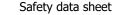
## 12.7 Other adverse effects:

Not described

## SECTION 13: DISPOSAL CONSIDERATIONS

## **13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous
Type of wa	ste (Regulation (EU) No 1357/2014):	
	ste (Regulation (EU) No 1357/2014): ric, HP8 Corrosive	



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## SECTION 13: DISPOSAL CONSIDERATIONS (continued)

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

## **Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

## SECTION 14: TRANSPORT INFORMATION

## Transport of dangerous goods by land: With regard to ADR 2023 and RID 2023: 14.1 UN number or ID number: UN1760 14.2 UN proper shipping name: CORROSIVE LIQUID, N.O.S. (zinc chloride) 14.3 Transport hazard class(es): 8 Labels: 8 14.4 Packing group: Π 14.5 Environmental hazards: Yes 14.6 Special precautions for user Special regulations: 274 Tunnel restriction code: Е Physico-Chemical properties: see section 9 Limited quantities: 1 L 14.7 Maritime transport in bulk Non-applicable according to IMO instruments: Transport of dangerous goods by sea: With regard to IMDG 40-20: 14.1 UN number or ID number: UN1760 14.2 UN proper shipping name: CORROSIVE LIQUID, N.O.S. (zinc chloride) 14.3 Transport hazard class(es): 8 Labels: 8 14.4 Packing group: Π 14.5 Marine pollutant: Yes 14.6 Special precautions for user 274 Special regulations: EmS Codes: F-A, S-B Physico-Chemical properties: see section 9 Limited quantities: 11 Non-applicable Segregation group: 14.7 Maritime transport in bulk Non-applicable according to IMO instruments: Transport of dangerous goods by air: With regard to IATA/ICAO 2023:

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SECTION 14: TRANSPORT I	NFORMATION (continued)	
	UN number or ID number: UN proper shipping name:	UN1760 CORROSIVE LIOUID, N.O.S. (zinc chloride)
	Transport hazard class(es): Labels:	8 8
	Packing group: Environmental hazards:	II Yes
14.6	Special precautions for user	
	Physico-Chemical properties:	see section 9
14.7	Maritime transport in bulk according to IMO instruments:	Non-applicable

## SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

## Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
E2	ENVIRONMENTAL HAZARDS	200	500

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):

Shall not be used in:

—ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,

tricks and jokes,

-games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

## Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

## Other legislation:

The product could be affected by sectorial legislation

## 15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

## SECTION 16: OTHER INFORMATION

## Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:** Non-applicable

## Texts of the legislative phrases mentioned in section 2:

H318: Causes serious eye damage.

H411: Toxic to aquatic life with long lasting effects.

H314: Causes severe skin burns and eye damage.

Texts of the legislative phrases mentioned in section 3:

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SECTION 16: OTHER INFORMATION (continued)
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3 <b>CLP Regulation (EC) No 1272/2008:</b> Acute Tox. 4: H302 - Harmful if swallowed. Aquatic Acute 1: H400 - Very toxic to aquatic life. Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects. Eye Dam. 1: H318 - Causes serious eye damage. Skin Corr. 1: H314 - Causes severe skin burns and eye damage. STOT SE 3: H335 - May cause respiratory irritation.
<b>Classification procedure:</b> Eye Dam. 1: Calculation method Aquatic Chronic 2: Calculation method Skin Corr. 1: Calculation method
Advice related to training: Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.
Principal bibliographical sources: http://echa.europa.eu http://eur-lex.europa.eu
Abbreviations and acronyms:
ADR: European agreement concerning the international carriage of dangerous goods by road IMDG: International maritime dangerous goods code IATA: International Air Transport Association ICAO: International Civil Aviation Organisation COD: Chemical Oxygen Demand BOD5: 5day biochemical oxygen demand BCF: Bioconcentration factor LD50: Lethal Dose 50 LC50: Lethal Concentration 50 EC50: Effective concentration 50 LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon UFI: unique formula identifier IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

## 1.1 Product identifier:

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## Other means of identification:

Non-applicable

## Relevant identified uses of the substance or mixture and uses advised against: 1.2

Relevant uses: Laboratory. For professional users only.

Uses advised against: All uses not specified in this section or in section 7.3

## Details of the supplier of the safety data sheet: 1.3

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Emergency telephone number: National Poison Center (Portugal) CIAV: +351 800 250 250; Outside Portugal: Call your 1.4 regional Poisons Information Service or call local Life Saving Service.

## SECTION 2: HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture:

## CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Carc. 2: Carcinogenicity, Category 2, H351 Eye Irrit. 2: Eye irritation, Category 2, H319 Flam. Liq. 2: Flammable liquids, Category 2, H225 STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

## 2.2 Label elements:

## CLP Regulation (EC) No 1272/2008:

Labelling of packages where the contents do not exceed 125 ml:

Danger

## Hazard statements:

Carc. 2: H351 - Suspected of causing cancer.

## **Precautionary statements:**

P201: Obtain special instructions before use.

P308+P313: IF exposed or concerned: Get medical advice/attention.

P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

## Substances that contribute to the classification

1,4-dioxane

#### 2.3 Other hazards:

Product does not meet PBT/vPvB criteria Endocrine-disrupting properties: The product does not meet the criteria.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

## 3.1 Substance:

Non-applicable

## 3.2 Mixture:

Chemical description: Mixture of substances



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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

## Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Index: Non-applicable Regulation 1272/2008 Carc 2: H351: Eve Irrit 2: H319: Flam Lig. 2: H225: STOT SE 3: H335 - Danger		Identification		Chemical name/Classification		Concentration
90-<100			1,4-dioxane <sup>(1)</sup>		Self-classified	
	Index:	Non-applicable	Regulation 1272/2008	Carc. 2: H351; Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H335 - Danger	(!) 🏟 🚸	90 - <100 %

<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

## SECTION 4: FIRST AID MEASURES

## 4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

## By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

## By skin contact:

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety Data Sheet

## By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

## By ingestion/aspiration:

In case of consumption, seek immediate medical assistance showing the SDS for the product.

## 4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

## 4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

## SECTION 5: FIREFIGHTING MEASURES

## 5.1 Extinguishing media:

## Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO<sub>2</sub>). **Unsuitable extinguishing media:** 

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

## 5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

## 5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

## Additional provisions:



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## SECTION 5: FIREFIGHTING MEASURES (continued)

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

## 6.1 Personal precautions, protective equipment and emergency procedures:

## For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

## For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

## 6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

## 6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

## 6.4 Reference to other sections:

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

## 7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

- C.- Technical recommendations on general occupational hygiene
  - Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.
- D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

## 7.2 Conditions for safe storage, including any incompatibilities:

- A.- Technical measures for storage
  - Store in a cool, dry, well-ventilated location
- B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

## 7.3 Specific end use(s):



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## SECTION 7: HANDLING AND STORAGE (continued)

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

There are no applicable occupational exposure limits for the substances contained in the product

## DNEL (Workers):

Non-applicable

## DNEL (General population):

Non-applicable

## PNEC:

Non-applicable

## 8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory ha protection	NON-disposable chemical protective gloves		EN ISO 374-1:2016+A1:2018 EN 16523-1:2015+A1:2018 EN ISO 21420:2020	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

## D.- Eye and face protection

	Pictogram	PPE	Labelling	CEN Standard	Remarks
	Mandatory face protection	Face shield	CAT II	EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.
E	Body protection				

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CTION	8: EXPOSURE	CONTR	OLS/PERSONA	AL PROTECT	[ON (	continued)		
Γ	Pictogram		PPE	Labelling	ng CEN Standard			Remarks
	Mandatory complete body protection	Disposable clothing for protection against chemical		CAT III	E	EN 1149-1,2,3 ISO34:2005+A1:2009 EN ISO 13982- 1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 N ISO 13688:2013 EN 464:1994		r professional use only. Clean periodical ording to the manufacturer's instruction
	Mandatory foot protection Mandatory foot			E	N ISO 13287:2020 N ISO 20345:2011 EN 13832-1:2019	Re	eplace boots at any sign of deterioration	
F A	Additional emerge	ency mea	asures		•			
	Emergency mea	asure	St	andards		Emergency measu	ıre	Standards
	Emergency sho	ower		5I Z358-1 11, ISO 3864-4:20	)11	Eyewash station	S	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:201
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SECT	TION 9: PHYSICAL AND CHEMICAL PROPERTIE	S (continued)
	Kinematic viscosity at 40 °C:	Non-applicable *
	Concentration:	Non-applicable *
	pH:	6 - 8
	Vapour density at 20 °C:	3 kg/m <sup>3</sup>
	Partition coefficient n-octanol/water 20 °C:	Non-applicable *
	Solubility in water at 20 °C:	Non-applicable *
	Solubility properties:	Non-applicable *
	Decomposition temperature:	Non-applicable *
	Melting point/freezing point:	≈102 °C
	Flammability:	
	Flash Point:	≈11 °C
	Flammability (solid, gas):	Non-applicable *
	Autoignition temperature:	Non-applicable *
	Lower flammability limit:	>1,9 % Volume
	Upper flammability limit:	22,5 % Volume
	Particle characteristics:	
	Median equivalent diameter:	Non-applicable
9.2	Other information:	
	Information with regard to physical hazard clas	sses:
	Explosive properties:	Non-applicable *
	Oxidising properties:	Non-applicable *
	Corrosive to metals:	Non-applicable *
	Heat of combustion:	Non-applicable *
	Aerosols-total percentage (by mass) of flammable components:	Non-applicable *
	Other safety characteristics:	
	Surface tension at 20 °C:	Non-applicable *
	Refraction index:	Non-applicable *
	*Not relevant due to the nature of the product, not providing info	rmation property of its hazards.

# SECTION 10: STABILITY AND REACTIVITY

## 10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

## 10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

## 10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

## 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

	Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
	Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable
10.5 Incompatible materials:					
	Acids	Water	Oxidising materials	Combustible materials	Others
	Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

## 10.6 Hazardous decomposition products:

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# SECTION 10: STABILITY AND REACTIVITY (continued)

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

## SECTION 11: TOXICOLOGICAL INFORMATION

## 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

## **Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- B- Inhalation (acute effect):

Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.

- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.
- C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.

- Contact with the eyes: Produces eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.

- IARC: Non-applicable
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- E- Sensitizing effects:
  - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.

Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

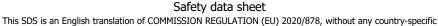
- G- Specific target organ toxicity (STOT)-repeated exposure:
  - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as
  - it does not contain substances classified as hazardous for this effect. For more information see section 3.
  - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

## Other information:

Non-applicable

## Specific toxicology information on the substances:



legislation



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## Date of compilation: 13/07/2023 Version: 1 SECTION 11: TOXICOLOGICAL INFORMATION (continued) Identification Acute toxicity Genus 1,4-dioxane LD50 oral >2000 mg/kg CAS: 123-91-1 LD50 dermal >2000 mg/kg Non-applicable EC: 204-661-8 LC50 inhalation Acute Toxicity Estimate (ATE mix):

	ATE mix	Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	Non-applicable
Dermal	>2000 mg/kg (Calculation method)	Non-applicable
Inhalation	>20 mg/L (4 h) (Calculation method)	Non-applicable

## 11.2 Information on other hazards:

## Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

## Other information

Non-applicable

# SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

## 12.1 Toxicity:

Not available

- 12.2 Persistence and degradability:
  - Not available

## **12.3** Bioaccumulative potential:

- Not available
- **12.4 Mobility in soil:** Not available
- **12.5** Results of PBT and vPvB assessment: Product does not meet PBT/vPvB criteria

## 12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

# 12.7 Other adverse effects:

Not described

## SECTION 13: DISPOSAL CONSIDERATIONS

## **13.1 Waste treatment methods:**

Code	Description	Waste class (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

## Type of waste (Regulation (EU) No 1357/2014):

HP3 Flammable, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP7 Carcinogenic, HP4 Irritant — skin irritation and eye damage

## Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

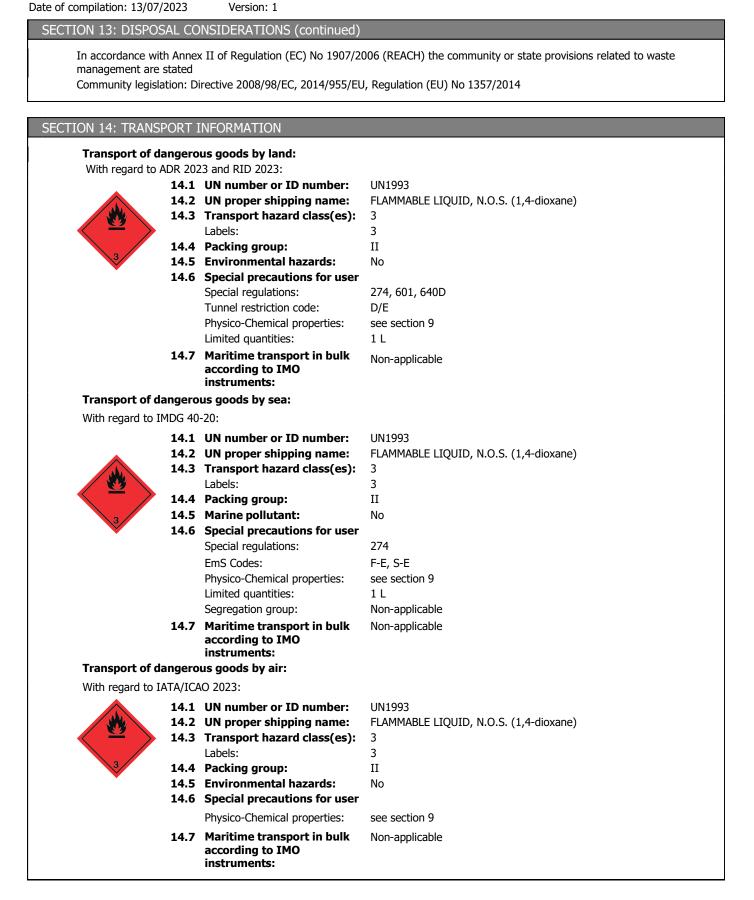
## Regulations related to waste management:

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## Date of compilation: 13/07/2023 Version: 1 SECTION 15: REGULATORY INFORMATION 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable Article 95, REGULATION (EU) No 528/2012: Non-applicable REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable Seveso III: Lower-tier Upper-tier Section Description requirements requirements P5c FLAMMABLE LIQUIDS 5000 50000 Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....): Shall not be used in: -ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, tricks and iokes. -games for one or more participants, or any article intended to be used as such, even with ornamental aspects. Specific provisions in terms of protecting people or the environment: It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product. Other legislation: The product could be affected by sectorial legislation 15.2 Chemical safety assessment: The supplier has not carried out evaluation of chemical safety. SECTION 16: OTHER INFORMATION Legislation related to safety data sheets: The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878). Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.: Non-applicable Texts of the legislative phrases mentioned in section 2: H319: Causes serious eye irritation. H351: Suspected of causing cancer. H335: May cause respiratory irritation. H225: Highly flammable liquid and vapour. Texts of the legislative phrases mentioned in section 3: The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3 CLP Regulation (EC) No 1272/2008: Carc. 2: H351 - Suspected of causing cancer. Eye Irrit. 2: H319 - Causes serious eye irritation. Flam. Liq. 2: H225 - Highly flammable liquid and vapour. STOT SE 3: H335 - May cause respiratory irritation. **Classification procedure:** Eye Irrit. 2: Calculation method Carc. 2: Calculation method STOT SE 3: Calculation method Flam. Liq. 2: Calculation method (2.6.4.3) Advice related to training: Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product. - CONTINUED ON NEXT PAGE -Date of compilation: 13/07/2023 Version: 1 Page 10/11

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SECTION 16: OTHER INFORMATION (continued)  Principal bibliographical sources:  http://acke.ourges.ou/
http://echa.europa.eu
http://eur-lex.europa.eu
Abbreviations and acronyms:
ADR: European agreement concerning the international carriage of dangerous goods by road IMDG: International maritime dangerous goods code IATA: International Air Transport Association ICAO: International Civil Aviation Organisation COD: Chemical Oxygen Demand BOD5: 5day biochemical oxygen demand BCF: Bioconcentration factor LD50: Lethal Dose 50 LC50: Lethal Concentration 50 EC50: Effective concentration 50 LOgPOW: Octanolwater partition coefficient Koc: Partition coefficient of organic carbon UFI: unique formula identifier IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

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# MB458 - Buffer NMIMD

	compilation: 13/07/2023 Revised TION 1: IDENTIFICATION OF THE	1: 11/08/2023	Version: 3 (Rep	
SECI	TION 1. IDENTIFICATION OF THE	SUDSTANCE/MIX	TURE AND OF	THE COMPANY/UNDERTAKING
1.1	Product identifier:	MB458 - Buffer N	IMIMD	
	Other means of identification:			
	Non-applicable			
1.2	Relevant identified uses of the sul	bstance or mixtur	e and uses advi	sed against:
	Relevant uses: Laboratory. For profess	ional users only.		
	Uses advised against: All uses not spe	cified in this section	or in section 7.3	
1.3	Details of the supplier of the safet	y data sheet:		
	NZYTech Estrada do Paco do Lumiar Campus do 1649-038 Lisboa - Lisboa - Portugal info@nzytech.com www.nzytech.com	) Lumiar - Edif. E, r/o	c	
1.4	Emergency telephone number: N			': +351 800 250 250; Outside Portugal: Call your r call local Life Saving Service.
SECT	TION 2: HAZARDS IDENTIFICATIO	N		
2.1	Classification of the substance or	mixture:		
	CLP Regulation (EC) No 1272/200	8:		
	Classification of this product has been		dance with CLP R	equiation (EC) No 1272/2008.
	Flam. Liq. 3: Flammable liquids, Categ Skin Corr. 1: Skin corrosion, Category	ory 3, H226		
2.2	Label elements:			
	CLP Regulation (EC) No 1272/200	8:		
	Labelling of packages where the conte	nts do not exceed 1	25 ml:	
	Danger			
	Hazard statements:			
	Skin Corr. 1: H314 - Causes severe sk	in hurns and eve da	mage	
	Precautionary statements:	in burns and eye ud	inage.	
	P280: Wear protective gloves/face pro	tection/protective c	lothing/protective	footwear.
	P301+P330+P331: IF SWALLOWED: F P303+P361+P353: IF ON SKIN (or ha P304+P340: IF INHALED: Remove pe	Rinse mouth. Do NO ir): Take off immedi rson to fresh air and	T induce vomiting ately all contamin I keep comfortable	g. nated clothing. Rinse skin with water or shower.
	Substances that contribute to the	classification		
	guanidinium thiocyanate			
	Authorized substances:			
	guanidinium thiocyanate (01-2120735	072-65-0001)		
2.3	Other hazards:			

# SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

# 3.1 Substance:

Non-applicable

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Date of compilation: 13/07/2023 Revised: 11/08/2023 SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Version: 3 (Replaced 2)

#### 3.2 Mixture:

Chemical description: Mixture of substances

#### **Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

	Identification		Chemical name/Classification			
CAS:		ethanol <sup>(1)</sup>	ATP CLP00			
EC: Index: REACH:	200-578-6 603-002-00-5 01-2119457610-43- XXXX	Regulation 1272/2008	Flam. Liq. 2: H225 - Danger	5 - <20 %		
CAS:		guanidinium thiocyai	nate <sup>(2)</sup> Self-classified			
EC: Index: REACH:	209-812-1 615-030-00-5 Non-applicable	Regulation 1272/2008	Acute Tox. 4: H302+H312+H332; Aquatic Chronic 3: H412; Skin Corr. 1: H314 - Danger 🕴 谷	5 - <10 %		

(1) Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2020/878 (2) Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

#### To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
guanidinium thiocyanate	LD50 oral	500 mg/kg (ATEi)	
CAS: 593-84-0	LD50 dermal	1100 mg/kg (ATEi)	
EC: 209-812-1	LC50 inhalation	11 mg/L (ATEi)	

## SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

#### By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

#### By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

#### By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

#### By ingestion/aspiration:

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

#### Most important symptoms and effects, both acute and delayed: 4.2

Acute and delayed effects are indicated in sections 2 and 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

#### SECTION 5: FIREFIGHTING MEASURES

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Safety data sheet This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation MB458 - Buffer NMIMD Date of compilation: 13/07/2023 Revised: 11/08/2023 Version: 3 (Replaced 2) SECTION 5: FIREFIGHTING MEASURES (continued) 5.1 Extinguishing media: Suitable extinguishing media: If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO2). Unsuitable extinguishing media: IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent. 5.2 Special hazards arising from the substance or mixture: As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk. 5.3 Advice for firefighters: Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC. Additional provisions: Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium. SECTION 6: ACCIDENTAL RELEASE MEASURES 6.1 Personal precautions, protective equipment and emergency procedures: For non-emergency personnel: Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground. For emergency responders: Wear protective equipment. Keep unprotected persons away. See section 8. 6.2 **Environmental precautions:** It is recommended to avoid environmental spillage of both the product and its container. Methods and material for containment and cleaning up: 6.3 It is recommended: Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13. 6.4 Reference to other sections: See sections 8 and 13. SECTION 7: HANDLING AND STORAGE 7.1 Precautions for safe handling: A.- General precautions for safe use Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used. B.- Technical recommendations for the prevention of fires and explosions

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	TION 7: HANDLING AND STORAGE (continued)		
	Transfer in well ventilated areas, preferably through localized sparks,) and ventilate during cleaning operations. Avoid the inertization systems where possible. Transfer at a slow speed possibility of electrostatic charges: ensure a perfect equipote clothes made of acrylic fibres, preferably wearing cotton cloth requirements for equipment and systems defined in Directive protecting the security and health of workers under the selec 10 for conditions and materials that should be avoided.	e existence of dangerous atmospl I to avoid the creation of electros ntial connection, always use grou- ning and conductive footwear. Co 2014/34/EC (ATEX 100) and wit	heres inside containers, applying static charges. Against the undings, do not wear work omply with the essential security th the minimum requirements for
	C Technical recommendations on general occupational hygiene		
	Do not eat or drink during the process, washing hands afterw	vards with suitable cleaning produ	ucts.
	D Technical recommendations to prevent environmental risks		
	It is recommended to have absorbent material available at cle	ose proximity to the product (See	e subsection 6.3)
7.2	Conditions for safe storage, including any incompatibilitie	es:	
	A Technical measures for storage		
	Store in a cool, dry, well-ventilated location		
	B General conditions for storage		
	Avoid sources of heat, radiation, static electricity and contact	with food. For additional information	ation see subsection 10.5
7.3	Specific end use(s):		
	Except for the instructions already specified it is not necessary to product.	provide any special recommend	ation regarding the uses of this
SECT	TION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION		
8.1	Control parameters:		
	Substances whose occupational exposure limits have to be monit legislation):	cored in the workplace (European	OEL, not country-specific
	There are no applicable occupational exposure limits for the subs	stances contained in the product	
	DNEL (Workers):		
	-	Short exposure	Long exposure

Identification		Systemic	Local	Systemic	Local
ethanol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 64-17-5	Dermal	Non-applicable	Non-applicable	343 mg/kg	Non-applicable
EC: 200-578-6	Inhalation	Non-applicable	Non-applicable	950 mg/m <sup>3</sup>	Non-applicable

## DNEL (General population):

		Short e	exposure	Long	exposure
Identification		Systemic	Local	Systemic	Local
ethanol	Oral	Non-applicable	Non-applicable	87 mg/kg	Non-applicable
CAS: 64-17-5	Dermal	Non-applicable	Non-applicable	206 mg/kg	Non-applicable
EC: 200-578-6	Inhalation	Non-applicable	Non-applicable	114 mg/m <sup>3</sup>	Non-applicable
PNEC:					
Identification					
ethanol	STP	580 mg/L	Fresh water	0,	96 mg/L
CAS: 64-17-5	Soil	0,63 mg/kg	Marine water	0,79 mg/L	
EC: 200-578-6	Intermittent	2,75 mg/L	Sediment (Fresh	water) 3,	6 mg/kg
	Oral	0,38 g/kg	Sediment (Marine	water) 2,	9 mg/kg

#### 8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

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ION 8: EXPOSURE	CONTROLS/PERSON	AL PROTECT	ION (continued)		
marking>> in acc use, cleaning, ma information see s the labour risk pr B Respiratory prote The use of protec	cordance with Regulation intenance, class of prote ubsection 7.1. All inform evention services as it is ction tion equipment will be n	n (EU) 2016/42 ection,) consu nation contained not known whe	5. For more information of It the information leaflet d herein is a recommend ether the company has a	on Perso provide ation wh dditiona	t, with the corresponding < <ce onal Protective Equipment (storaged by the manufacturer. For more hich needs some specification fro I measures at its disposal.</ce 
C Specific protectio					
Pictogram	PPE	Labelling	CEN Standard		Remarks
Mandatory hand protection	NON-disposable chemical protective gloves		EN ISO 374-1:2016+A1:201 EN 16523-1:2015+A1:2018 EN ISO 21420:2020	8 manuf the p	The Breakthrough Time indicated by the facturer must exceed the period during v product is being used. Do not use protect ms after the product has come into cont with skin.
	d has therefore to be ch			erial ca	n not be calculated in advance w
Pictogram	PPE	Labelling	CEN Standard		Remarks
Mandatory face protection	Face shield		EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018		n daily and disinfect periodically accordin nanufacturer´s instructions. Use if there risk of splashing.
E Body protection	<u> </u>			-	
Pictogram	PPE	Labelling	CEN Standard		Remarks
Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties	CAT III	EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982- 1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994		r professional use only. Clean periodicall ording to the manufacturer's instruction
Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN ISO 13287:2020 EN ISO 20345:2011 EN 13832-1:2019	Re	eplace boots at any sign of deterioration.
F Additional emerge	ency measures				
Emergency mea	asure S	itandards	Emergency mea	sure	Standards
Emergency sho	ISO 3864-1:2	ISI Z358-1 011, ISO 3864-4:20	011 Eyewash static	ins	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:201
spillage of both the p Volatile organic co	ne community legislation product and its container <b>mpounds:</b> ive 2010/75/EU, this pro 19 %	. For additional	information see subsecti Ilowing characteristics:		mmended to avoid environmenta D
Average carbon r	umber: 2				

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SECT	TION 9: PHYSICAL AND CHEMICAL PROPERTIES	S
9.1	Information on basic physical and chemical pro	perties:
	For complete information see the product datasheet.	
	Appearance:	
	Physical state at 20 °C:	Liquid
	Appearance:	Not available
	Colour:	Colourless
	Odour:	Alcohol
	Odour threshold:	Non-applicable *
	Volatility:	
	Boiling point at atmospheric pressure:	95 ⁰C
	Vapour pressure at 20 °C:	2747 Pa
	Vapour pressure at 50 °C:	14110,3 Pa (14,11 kPa)
	Evaporation rate at 20 °C:	Non-applicable *
	Product description:	
	Density at 20 °C:	1010 kg/m³
	Relative density at 20 °C:	0,973
	Dynamic viscosity at 20 °C:	1,27 cP
	Kinematic viscosity at 20 °C:	1,3 mm²/s
	Kinematic viscosity at 40 °C:	Non-applicable *
	Concentration:	Non-applicable *
	pH:	6,8 - 7,2
	Vapour density at 20 °C:	Non-applicable *
	Partition coefficient n-octanol/water 20 °C:	Non-applicable *
	Solubility in water at 20 °C:	Non-applicable *
	Solubility properties:	Non-applicable *
	Decomposition temperature:	Non-applicable *
	Melting point/freezing point:	Non-applicable *
	Flammability:	
	Flash Point:	55 °C
	Flammability (solid, gas):	Non-applicable *
	Autoignition temperature:	423 °C
	Lower flammability limit:	Not available
	Upper flammability limit:	Not available
	Particle characteristics:	
	Median equivalent diameter:	Non-applicable
9.2	Other information:	
	Information with regard to physical hazard clas	
	Explosive properties:	Non-applicable *
	Oxidising properties:	Non-applicable *
	Corrosive to metals:	Non-applicable *
	Heat of combustion:	Non-applicable *
	Aerosols-total percentage (by mass) of flammable components: Other safety characteristics:	Non-applicable *
	*Not relevant due to the nature of the product, not providing info	rmation property of its bazards
	not relevant due to the nature of the product, not providing initia	

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SECT	TION 9: PHYSICAL AND (	HEMICAL PROPERTIE	ES (continued)		
	Surface tension at 20 °C:		Non-applicable *		
	Refraction index:		Non-applicable *		
	*Not relevant due to the nature of	f the product, not providing inf	formation property of its hazards	5.	
0-0-					
SECT	TON 10: STABILITY AND	REACTIVITY			
10.1	Reactivity:				
	No hazardous reactions are	expected because the pr	oduct is stable under reco	mmended storage condit	tions. See section 7.
10.2	Chemical stability:				
	Chemically stable under the	indicated conditions of s	storage, handling and use.		
10.3	Possibility of hazardous	reactions:			
	Under the specified condition	ons, hazardous reactions	that lead to excessive tem	peratures or pressure are	e not expected.
10.4	Conditions to avoid:				
	Applicable for handling and	storage at room tempera	ature:		
	Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
	Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable
10.5	Incompatible materials:				
	Acids	Water	Oxidising materials	Combustible materials	Others
	Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases
10.6	Hazardous decomposition	on products:			
	See subsection 10.3, 10.4 a complex mixtures of chemi				
SECT	TION 11: TOXICOLOGICA	L INFORMATION			
11.1	Information on hazard o	lasses as defined in R	egulation (EC) No 1272	2/2008:	
	The experimental informati	on related to the toxicolog	gical properties of the pro	duct itself is not available	2
	Dangerous health implic	ations:			
	In case of exposure that is adverse effects on health n A- Ingestion (acute effect)	ay result, depending on		an the recommended oc	cupational exposure limits,
	- Acute toxicity: Based	on available data the cl	assification criteria are not	met however it contair	s substances classified as

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.
- B- Inhalation (acute effect):
  - Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
  - Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract
- C- Contact with the skin and the eyes (acute effect):
  - Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
  - Contact with the eyes: Produces serious eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

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## MB458 - Buffer NMIMD

ION 11. TOVICOLO				
UN 11. TOXICOLU	OGICAL INFORMATION (continued)			
	y: Based on available data, the classification the effects mentioned. For more information (1)		does not contain substa	ances class
hazardous for this - Reproductive t	Based on available data, the classification s effect. For more information see section coxicity: Based on available data, the class rdous for this effect. For more information s:	3. ification criteria are not me		
hazardous with se - Skin: Based or	ased on available data, the classification c ensitising effects. For more information se n available data, the classification criteria a	e section 3. are not met, as it does not o		
	s effect. For more information see section gan toxicity (STOT) - single exposure:	3.		
this effect. For m	le data, the classification criteria are not m ore information see section 3. gan toxicity (STOT)-repeated exposure:	net, as it does not contain s	ubstances classified as h	azardous f
<ul> <li>Skin: Based or</li> </ul>	in substances classified as hazardous for the navailable data, the classification criteria as s effect. For more information see section h:	are not met, as it does not o		ified as
Based on availabl	le data, the classification criteria are not m ore information see section 3.	net, as it does not contain s	ubstances classified as h	nazardous f
Based on availabl this effect. For m Other information	le data, the classification criteria are not m ore information see section 3.	net, as it does not contain s	ubstances classified as h	nazardous f
Based on availabl this effect. For m <b>Other information</b> Non-applicable	le data, the classification criteria are not m ore information see section 3.	net, as it does not contain s	ubstances classified as h	azardous f
Based on availabl this effect. For m <b>Other information</b> Non-applicable	le data, the classification criteria are not m ore information see section 3.	net, as it does not contain s	ubstances classified as h	nazardous f
Based on availabl this effect. For m <b>Other information</b> Non-applicable	le data, the classification criteria are not m ore information see section 3.		Acute toxicity	Genu
Based on available this effect. For m Other information: Non-applicable Specific toxicology ethanol	le data, the classification criteria are not m ore information see section 3. : n information on the substances:	LD50 oral	Acute toxicity 6200 mg/kg	Genu Rat
Based on available this effect. For m Other informations Non-applicable Specific toxicology ethanol CAS: 64-17-5	le data, the classification criteria are not m ore information see section 3. : n information on the substances:	LD50 oral LD50 dermal	Acute toxicity	Genu
Based on available this effect. For m Other information: Non-applicable Specific toxicology ethanol	le data, the classification criteria are not m ore information see section 3. : n information on the substances:	LD50 oral	Acute toxicity 6200 mg/kg	Genu Rat
Based on available this effect. For m Other informations Non-applicable Specific toxicology ethanol CAS: 64-17-5	le data, the classification criteria are not m ore information see section 3. : n information on the substances:	LD50 oral LD50 dermal	Acute toxicity 6200 mg/kg 20000 mg/kg	Genu Rat Rabb
Based on available this effect. For m Other information: Non-applicable Specific toxicology ethanol CAS: 64-17-5 EC: 200-578-6	le data, the classification criteria are not m ore information see section 3. ; n information on the substances:	LD50 oral LD50 dermal LC50 inhalation	Acute toxicity 6200 mg/kg 20000 mg/kg 124,7 mg/L (4 h)	Genu Rat
Based on available this effect. For m Other information: Non-applicable Specific toxicology ethanol CAS: 64-17-5 EC: 200-578-6 guanidinium thiocyanate	le data, the classification criteria are not m ore information see section 3. ; n information on the substances:	LD50 oral LD50 dermal LC50 inhalation LD50 oral	Acute toxicity 6200 mg/kg 20000 mg/kg 124,7 mg/L (4 h) 500 mg/kg (ATEi)	Genu Rat
Based on available this effect. For m Other information: Non-applicable Specific toxicology ethanol CAS: 64-17-5 EC: 200-578-6 guanidinium thiocyanate CAS: 593-84-0	le data, the classification criteria are not m ore information see section 3. r information on the substances: Identification	LD50 oral LD50 dermal LC50 inhalation LD50 oral LD50 dermal	Acute toxicity 6200 mg/kg 20000 mg/kg 124,7 mg/L (4 h) 500 mg/kg (ATEi) 1100 mg/kg (ATEi)	Genu Rat Rabb
Based on availabl this effect. For m Other information: Non-applicable Specific toxicology ethanol CAS: 64-17-5 EC: 200-578-6 guanidinium thiocyanate CAS: 593-84-0 EC: 209-812-1	le data, the classification criteria are not m ore information see section 3. r information on the substances: Identification	LD50 oral LD50 dermal LC50 inhalation LD50 oral LD50 dermal	Acute toxicity 6200 mg/kg 20000 mg/kg 124,7 mg/L (4 h) 500 mg/kg (ATEi) 1100 mg/kg (ATEi)	Genu Rat Rabb Rat
Based on availabl this effect. For m Other information: Non-applicable Specific toxicology ethanol CAS: 64-17-5 EC: 200-578-6 guanidinium thiocyanate CAS: 593-84-0 EC: 209-812-1	le data, the classification criteria are not m ore information see section 3. r information on the substances: Identification	LD50 oral LD50 dermal LC50 inhalation LD50 dermal LD50 dermal LC50 inhalation	Acute toxicity 6200 mg/kg 20000 mg/kg 124,7 mg/L (4 h) 500 mg/kg (ATEi) 1100 mg/kg (ATEi) 11 mg/L (ATEi) Ingredient(s) of unknov	Genu Rat Rabb Rat

#### 11.2 Information on other hazards:

#### **Endocrine disrupting properties**

Endocrine-disrupting properties: The product does not meet the criteria.

## **Other information**

Non-applicable

Inhalation

## SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

122,22 mg/L (4 h) (Calculation method)

0 %

12.1 Toxicity:

## Acute toxicity:

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	ION 12: ECOLOGICAL INFORMAT		ucuj						
	Identification			Concentration			Species		Genus
	ethanol		LC50	LC50 11000 mg/L (96 h) A		Alburi	nus alburnu	IS	Fish
	CAS: 64-17-5		EC50	9268 mg/L (48 h)		Dapl	nnia magna		Crustacean
	EC: 200-578-6		EC50	1450 mg/L (192 h) Microo		Microcy	ocystis aeruginosa		Algae
	guanidinium thiocyanate		LC50	>10 - 100 mg/L (96	,				Fish
	CAS: 593-84-0		EC50	>10 - 100 mg/L (48	-				Crustacean
	EC: 209-812-1		EC50	>10 - 100 mg/L (72	h)				Algae
	Chronic toxicity:					-1			
	Identification			Concentration			Species		Genus
	ethanol		NOEC	250 mg/L		Da	anio rerio		Fish
	CAS: 64-17-5 EC: 200-578-6		NOEC	2 mg/L		Ceriod	aphnia dub	ia	Crustacean
2.2	Persistence and degradability:								
	Substance-specific information:								
	Identification		D	egradability			Biodegrada	ability	
	ethanol		BOD5 Non-applicable		Conc	entration		100 m	g/L
	CAS: 64-17-5	CC	DD	Non-applicable	Peric	d		14 day	
	EC: 200-578-6	BC	DD5/COD	Non-applicable	% Bi	odegradable		89 %	
2.3	Bioaccumulative potential:								
	Substance-specific information: Identification						Bioaccumulation potential		
	ethanol				BC		3		
	CAS: 64-17-5					w Log	-0.31	1	
~ 4	EC: 200-578-6				PC	tential	Low		
2.4	Mobility in soil:								
	Identification		Ab	sorption/desorption			Vola	atility	
	ethanol		Кос 1			Henry		4,61E-1 Pa·m³/mol	
	AS: 64-17-5		onclusion	Very High		Dry soil		Yes	
					25 °C)	Moist soil		Yes	
	EC: 200-578-6		Irface tensior	n 2,339E-2 N/m (2	/				
-	Results of PBT and vPvB assessme	ent:		1 Z,559E-2 WIII (A					
_	<b>Results of PBT and vPvB assessme</b> Product does not meet PBT/vPvB crite	ent:		1 2,339E-2 N/III (A					
-	Results of PBT and vPvB assessme	ent:							
2.6	<b>Results of PBT and vPvB assessme</b> Product does not meet PBT/vPvB crite	ent: ria							
.2.6	<b>Results of PBT and vPvB assessme</b> Product does not meet PBT/vPvB crite <b>Endocrine disrupting properties:</b>	ent: ria			/				
.2.6 .2.7	<b>Results of PBT and vPvB assessme</b> Product does not meet PBT/vPvB crite <b>Endocrine disrupting properties:</b> Endocrine-disrupting properties: The p	ent: ria							

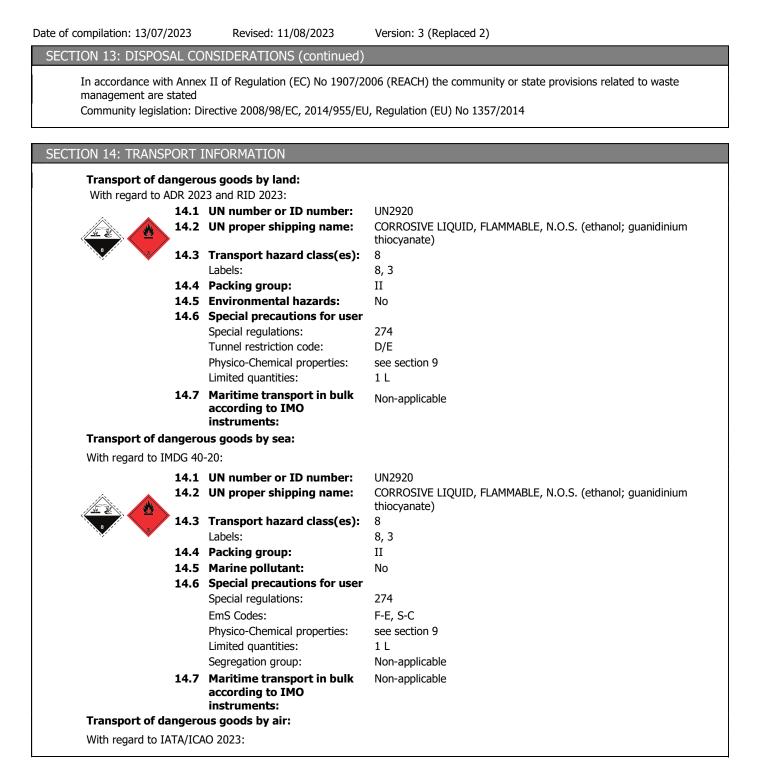
Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

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Safety data sheet legislation

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Date of compilation: 13/07/2023	Revised: 11/08/2023	Version: 3 (Replaced 2)
SECTION 14: TRANSPORT	INFORMATION (continued)	
	UN number or ID number: UN proper shipping name:	UN2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (ethanol; guanidinium thiocyanate)
14.	<b>3 Transport hazard class(es):</b> Labels:	8 8, 3
14.4	Packing group:	II
14.	5 Environmental hazards:	No
14.0	5 Special precautions for user	
	Physico-Chemical properties:	see section 9
14.	7 Maritime transport in bulk according to IMO instruments:	Non-applicable

## SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: ethanol (Product-type 1, 2, 4)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

## Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5000	50000

### Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):

Shall not be used in:

-ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,

-tricks and jokes,

-games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

#### Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

#### Other legislation:

The product could be affected by sectorial legislation

#### 15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

#### SECTION 16: OTHER INFORMATION

#### Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

## Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

### Texts of the legislative phrases mentioned in section 2:

H314: Causes severe skin burns and eye damage.

H226: Flammable liquid and vapour.

#### Texts of the legislative phrases mentioned in section 3:

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Date of compilation: 13/07/2023	Revised: 11/08/2023	Version: 3 (Replaced 2)
SECTION 16: OTHER INFORM	ATION (continued)	
The phrases indicated do no individual components which		; they are present merely for informative purposes and refer to the
CLP Regulation (EC) No 1 Acute Tox. 4: H302+H312+ Aquatic Chronic 3: H412 - H Flam. Liq. 2: H225 - Highly Skin Corr. 1: H314 - Causes	H332 - Harmful if swallowe armful to aquatic life with l flammable liquid and vapou	r.
<b>Classification procedure:</b> Skin Corr. 1: Calculation me Flam. Liq. 3: Calculation me	thod	
Advice related to training Training is recommended in interpretation of this safety	order to prevent industrial	risks for staff using this product and to facilitate their comprehension and abel on the product.
Principal bibliographical http://echa.europa.eu http://eur-lex.europa.eu		
Abbreviations and acrom ADR: European agreement of IMDG: International maritim IATA: International Air Tran ICAO: International Civil Avi COD: Chemical Oxygen Den BOD5: 5day biochemical oxy BCF: Bioconcentration factor LD50: Lethal Dose 50 LC50: Lethal Concentration EC50: Effective concentration EC50: Effective concentration LogPOW: Octanolwater part Koc: Partition coefficient of UFI: unique formula identifie IARC: International Agency	oncerning the international e dangerous goods code sport Association ation Organisation and gen demand 50 n 50 ition coefficient organic carbon er	carriage of dangerous goods by road

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

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### MB458 - rDNAse

e of	compilation: 13/07/202	3 Revised: 27/07/2023 Version: 2 (Replaced 1)					
ECT	TION 1: IDENTIFICA	TION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING					
l.1	Product identifier:	MB458 - rDNAse					
		Nuclease, deoxyribo-					
	CAS:	9003-98-9					
	EC:	232-667-0					
	Index:	Non-applicable					
	REACH:	01-2120756696-38-XXXX					
	Other means of ide	ntification:					
	Non-applicable						
1.2	Relevant identified uses of the substance or mixture and uses advised against:						
	Relevant uses: Laboratory. For professional users only.						
	Uses advised against: All uses not specified in this section or in section 7.3						
1.3	Details of the supplier of the safety data sheet:						
	NZYTech Estrada do Paco do Li 1649-038 Lisboa - Lis info@nzytech.com www.nzytech.com	umiar Campus do Lumiar - Edif. E, r/c boa - Portugal					
1.4		<b>ne number:</b> National Poison Center (Portugal) CIAV: +351 800 250 250; Outside Portugal: Call your regional Poisons Information Service or call local Life Saving Service.					
SECT	TION 2: HAZARDS I	DENTIFICATION **					
2.1	Classification of th	e substance or mixture:					
	CLP Regulation (EC) No 1272/2008:						
	Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.						
	Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334						
2.2	Label elements:						
	CLP Regulation (EC	:) No 1272/2008:					
		where the contents do not exceed 125 ml:					
	Danger						



#### Hazard statements:

Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### **Precautionary statements:**

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P284: Wear respiratory protection.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

## 2.3 Other hazards:

Product does not meet PBT/vPvB criteria Endocrine-disrupting properties: The product does not meet the criteria.

\*\* Changes with regards to the previous version

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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legislation

### MB458 - rDNAse

Date of compilation: 13/07/2023

Revised: 27/07/2023 Version: 2 (Replaced 1)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

#### 3.1 Substance:

Chemical description: Mixture of substances

#### **Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

	Identification		Chemical name/Classification			
CAS:		Nuclease, deoxyribo-	Self-classified			
	232-667-0 Non-applicable 01-2120756696-38- XXXX	Regulation 1272/2008	Resp. Sens. 1: H334 - Danger	100 %		

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

#### 3.2 Mixture:

Non-applicable

## SECTION 4: FIRST AID MEASURES

#### 4.1 **Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

#### By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

#### By skin contact:

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety Data Sheet

## By eye contact:

This product does not contain substances classified as hazardous for eye contact. Rinse eyes thoroughly for at least 15 minutes with lukewarm water, ensuring that the person affected does not rub or close their eyes.

### By ingestion/aspiration:

In case of consumption, seek immediate medical assistance showing the SDS for the product.

#### 4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

#### Indication of any immediate medical attention and special treatment needed: 4.3

#### Non-applicable

## SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media:

#### Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

### Unsuitable extinguishing media:

Non-applicable

#### Special hazards arising from the substance or mixture: 5.2

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

#### 5.3 Advice for firefighters:

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## Date of compilation: 13/07/2023 Revised: 27/07/2023

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## SECTION 5: FIREFIGHTING MEASURES (continued)

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

### Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures:

#### For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

#### For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

#### 6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

#### 6.3 Methods and material for containment and cleaning up:

It is recommended:

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

#### 6.4 Reference to other sections:

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

#### 7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

#### 7.2 Conditions for safe storage, including any incompatibilities:

#### A.- Technical measures for storage

Store in a cool, dry, well-ventilated location

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

## 7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

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## MB458 - rDNAse

Date of compilation: 13/07/2023

Version: 2 (Replaced 1)

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 **Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

There are no applicable occupational exposure limits for the substances contained in the product

Revised: 27/07/2023

### **DNEL (Workers):**

Non-applicable

### **DNEL (General population):**

Non-applicable

#### PNEC:

Identification				
Nuclease, deoxyribo-	STP	65 mg/L	Fresh water	0,00089 mg/L
CAS: 9003-98-9	Soil	0,00012 mg/kg	Marine water	0,000089 mg/L
EC: 232-667-0	Intermittent	0,0089 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable

#### 8.2 **Exposure controls:**

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

#### B.- Respiratory protection

	Pictogram	PPE	Labelling	CEN Standard	Remarks				
	Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.				
C	Specific protection	n for the hands							
	Pictogram	PPE	Labelling	CEN Standard	Remarks				
	Mandatory hand protection	Protective gloves against minor risks	CATI		Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2004+A1:2010 and EN ISO 374- 1:2016+A1:2018				
D	Eye and face prot	ection							
	Pictogram	PPE	Labelling	CEN Standard	Remarks				

	Pictogram	PPE	Labelling	CEN Standard	Remarks
	Mandatory face protection	Panoramic glasses against splash/projections.	CAT II	EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer 's instructions. Use if there is a risk of splashing.
E	Body protection				

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing	CATI		Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.

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ION 8: EXPOSURE	CONTRO	JES/PERSON/	AE PROTECTIO	ON (continued)		
Pictogram		PPE	Labelling	CEN Standard		Remarks
	Anti-sl	lip work shoes	CAT II	EN ISO 20347:2012	period recom	ce before any evidence of deterioratic ds of prolonged exposure to the prodi- professional/industrial users CE III is mended, in accordance with the regu EN ISO 20345:2012 y EN 13832-1:20
F Additional emerge	gency meas	sures	•		•	
Emergency me	easure	St	tandards	Emergency measu	ıre	Standards
Emergency sh	ower		SI Z358-1 111, ISO 3864-4:201	1 Eyewash station	5	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2
Environmental ex	I	ntrole		Lycindon station	5	
spillage of both the Volatile organic o	product an ompound	nd its container. <b>s:</b>	For additional ir	on of the environment it in nformation see subsection owing characteristics:	is recor n 7.1.D	nmended to avoid environmer
V.O.C. (Supply):			weight	owing characteristics.		
V.O.C. density a			/m <sup>3</sup> (0 g/L)			
Average carbon		<b>.</b>	applicable			
Average molecul			applicable			
ON 9: PHYSICAL Information on ba	asic physi	cal and chemi	ical properties	:		
<b>Information on ba</b> For complete inform	asic physi	cal and chemi	ical properties	:		
Information on ba For complete inform Appearance:	asic physi ation see t	cal and chemi	ical properties asheet.	: vailable		
Information on ba For complete inform Appearance: Physical state at 20	asic physi ation see t	cal and chemi	<b>ical properties</b> asheet. Not a			
Information on ba For complete inform Appearance: Physical state at 20 Appearance:	asic physi ation see t	cal and chemi	<b>ical properties</b> asheet. Not a Not a	vailable		
Information on ba For complete inform Appearance: Physical state at 20 Appearance: Colour:	asic physi ation see t	cal and chemi	<b>ical properties</b> asheet. Not a Not a Not a	vailable vailable		
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Information on ba	asic physi ation see t	cal and chemi	<b>ical properties</b> asheet. Not a Not a Not a Not a	vailable vailable vailable vailable		
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- CONTINUED ON NEXT PAGE -

Revised: 27/07/2023

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## MB458 - rDNAse

Date of	compilation: 13/07/2023 Revised: 27/07/2023	3 Version: 2 (Replaced 1)
SECT	TION 9: PHYSICAL AND CHEMICAL PROPERTI	IES (continued)
	Solubility in water at 20 °C:	Non-applicable *
	Solubility properties:	Non-applicable *
	Decomposition temperature:	Non-applicable *
	Melting point/freezing point:	Non-applicable *
	Flammability:	
	Flash Point:	Non-applicable
	Flammability (solid, gas):	Non-applicable *
	Autoignition temperature:	Non-applicable *
	Lower flammability limit:	Non-applicable *
	Upper flammability limit:	Non-applicable *
	Particle characteristics:	
	Median equivalent diameter:	Non-applicable
9.2	Other information:	
	Information with regard to physical hazard cl	asses:
	Explosive properties:	Non-applicable *
	Oxidising properties:	Non-applicable *
	Corrosive to metals:	Non-applicable *
	Heat of combustion:	Non-applicable *
	Aerosols-total percentage (by mass) of flammable components:	Non-applicable *
	Other safety characteristics:	
	Surface tension at 20 °C:	Non-applicable *
	Refraction index:	Non-applicable *
	*Not relevant due to the nature of the product, not providing in	iformation property of its hazards.
CEC		
SEC	TION 10: STABILITY AND REACTIVITY	
10.1	Reactivity:	
	No hazardous reactions are expected because the p	product is stable under recommended storage conditions. See section 7.
10.2	Chemical stability:	
	Chemically stable under the indicated conditions of	storage, handling and use.
10.3	Possibility of hazardous reactions:	

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

### **10.4** Conditions to avoid:

Applicable for handling and storage at room temperature:

[	Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

### 10.5 Incompatible materials:

[	Acids	Water	Oxidising materials	Combustible materials	Others
	Avoid strong acids	Not applicable	Not applicable	Not applicable	Avoid alkalis or strong bases

### **10.6** Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

### SECTION 11: TOXICOLOGICAL INFORMATION

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## MB458 - rDNAse

t co	ompilation: 13/07/2023	Revised: 27/07/2023	Version: 2 (Re	placed 1)				
CTI	ION 11: TOXICOLOGICAL	INFORMATION (continu	ued)					
1	Information on hazard cla	asses as defined in Regul	ation (EC) No 12	272/2008:				
	The experimental information	n related to the toxicological	properties of the	product itself is r	not available			
	Dangerous health implica	tions:						
	In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure: A- Ingestion (acute effect):							
	<ul><li>hazardous for consumption</li><li>Corrosivity/Irritability:</li></ul>	on available data, the classifi on. For more information see Based on available data, the r this effect. For more inforr	e section 3 e classification crit	eria are not met,				
	as hazardous for inhalation - Corrosivity/Irritability:	on available data, the classi on. For more information see Based on available data, the r this effect. For more inforr the eyes (acute effect):	e section 3. e classification crit	eria are not met,				
<ul> <li>Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain a classified as hazardous for skin contact. For more information see section 3.</li> <li>Contact with the eyes: Based on available data, the classification criteria are not met, as it does not contain classified as hazardous for this effect. For more information see section 3.</li> <li>D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):         <ul> <li>Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substate as hazardous for the effects mentioned. For more information see section 3.</li> <li>CMR effects (carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substate as hazardous for the effects mentioned. For more information see section 3.</li> <li>Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substate as hazardous for this effect. For more information see section 3.</li> <li>Reproductive: Based on available data, the classification criteria are not met, as it does not contain substance hazardous for this effect. For more information see section 3.</li> <li>Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substance hazardous for this effect. For more information see section 3.</li> <li>Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substance hazardous for this effect. For more information see section 3.</li> <li>Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain see section 4.</li> <li>Sensitizing effects:</li> </ul> </li> </ul>								
				ces classified as				
	<ul> <li>Respiratory: Prolonged exposure can result in specific respiratory hypersensitivity.</li> <li>Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.</li> <li>F- Specific target organ toxicity (STOT) - single exposure:</li> </ul>							
	Based on available data, this effect. For more infor G- Specific target organ toxi		·	s not contain sul	bstances classified as h	nazardous for		
<ul> <li>Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classifi it does not contain substances classified as hazardous for this effect. For more information see s</li> <li>Skin: Based on available data, the classification criteria are not met, as it does not contain su hazardous for this effect. For more information see section 3.</li> <li>H- Aspiration hazard:</li> </ul>				ion see section 3.				
Based on available data, the classification criteria are not met, as it does not contain substances classified as hazard this effect. For more information see section 3. Other information:					nazardous for			
	Non-applicable							
	Specific toxicology inform	ation on the substances	:					
		Identification	-		cute toxicity	Genus		
	Nuclease, deoxyribo-			LD50 oral	>2000 mg/kg	Genus		
	CAS: 9003-98-9			LD50 dermal	>2000 mg/kg			

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legislation

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ECI	TION 11: TOXICOLOGICAL INFORMA	TION (continued)						
	Endocrine disrupting properties							
	Endocrine-disrupting properties: The proc	luct does not meet th	e criteria.					
	Other information							
	Non-applicable							
SECT	TION 12: ECOLOGICAL INFORMATIO	N						
12.1	Toxicity:							
	Not available							
12.2	Persistence and degradability:							
	Substance-specific information:							
	Identification	De	egradability	Bi	odegradability			
	Nuclease, deoxyribo-	BOD5	Non-applicable	Concentration	Non-applicable			
	CAS: 9003-98-9	COD	Non-applicable	Period	28 days			
	EC: 232-667-0	BOD5/COD	Non-applicable	% Biodegradable	95 %			
12.3	Bioaccumulative potential:							
	Substance-specific information:							
	Ident	tification		Bioac	cumulation potential			
	Nuclease, deoxyribo-			BCF				
	CAS: 9003-98-9			Pow Log	250			
	EC: 232-667-0			Potential				
	Mobility in soil:							
12.4	Not available							
12.4	Results of PBT and vPvB assessment	:						
	Product does not meet PBT/vPvB criteria							
	Troduce does not meet i bijvi vb cheend							
12.5	Endocrine disrupting properties:							
12.5		duct does not meet th	ie criteria.					
12.5 12.6	Endocrine disrupting properties:	duct does not meet th	e criteria.					

#### 13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

#### Type of waste (Regulation (EU) No 1357/2014):

HP13 Sensitising

#### Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

#### **Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

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SECTION 14: TRANSPORT INFORMATION         Transport of dangerous goods by land:         With regard to ADR 2023 and RD 2023:       Non-applicable         14.1       UN proper shipping name:       Non-applicable         14.3       UN proper shipping name:       Non-applicable         14.4       Packing group:       Non-applicable         14.5       Environmental hazards::       Non-applicable         14.5       Special preculutions for user       Non-applicable         14.5       Special preculutions for user       Non-applicable         14.7       Maritime transport in bulk according to IMO instruments:       Non-applicable         14.7       Maritime transport in bulk according to IMO mapplicable       Non-applicable         14.1       UN proper shipping name:       Non-applicable         14.3       UN proper shipping name:       Non-applicable         14.3       UN proper shipping name:       Non-applicable         14.4       Packing group:       Non-applicable         14.3       UN proper shipping name:       Non-applicable         14.4       Packing group:       Non-applicable         14.5       Maritime pollutant:       No         14.6       Special reguations:       Non-applicable      <	Date of compilation:	13/07/2023 Revised: 27/0	07/2023	Version: 2 (Replaced 1)
With regard to ADR 2023 and RID 2023:       Non-applicable         14.1       UN proper shipping name:       Non-applicable         14.2       UN proper shipping name:       Non-applicable         14.3       Transport hazard class(es):       Non-applicable         14.4       Packing group:       Non-applicable         14.5       Environmental hazards:       Non-applicable         14.6       Special regulations:       Non-applicable         14.7       Maritime transport in bulk according to IMO instruments:       Non-applicable         14.1       UN proper shipping name:       Non-applicable         14.1       UN number or ID number:       Non-applicable         14.1       UN proper shipping name:       Non-applicable         14.2       UN proper shipping name:       Non-applicable         14.3       Transport for ID number:       Non-applicable         14.3       Transport properties:       Non-applicable         14.3       Transport shipping name:       Non-applicable         14.4       UN number or ID number:       Non-applicable         14.5       Marine pollutant:       No         14.6       Special regulatons:       Non-applicable         14.7       Maritime transport in bulk according to IMO instru	SECTION 14: T	RANSPORT INFORMATION		
<ul> <li>14.2 UN proper shipping name: Non-applicable Non-applicable Non-applicable Non-applicable Non-applicable Non-applicable</li> <li>14.4 Packing group: Non-applicable Non-applicable Non-applicable Turnel restriction code: Non-applicable Physico-Chemical properties: see section 9</li> <li>14.7 Maritime transport in bulk according to IMOs for user Special regulations: Non-applicable</li> <li>14.8 Transport dangerous goods by sea: With regard to IMDG 40-20:</li> <li>14.1 UN number or ID number: Non-applicable</li> <li>14.5 Mariting transport in bulk according to IMO number or ID number: Non-applicable</li> <li>14.8 Transport hazard class(e): Non-applicable</li> <li>14.9 Packing group: Non-applicable</li> <li>14.4 Packing group: Non-applicable</li> <li>14.5 Mariting transport in bulk according to IMO number or ID number: Special regulations: Non-applicable</li> <li>14.4 Packing group: Non-applicable</li> <li>14.5 Mariting transport in bulk according to IMO number or ID number: Special regulations: Non-applicable</li> <li>14.4 Packing group: Non-applicable</li> <li>14.5 Mariting transport in bulk according to IMO number or ID number: Special regulations: Non-applicable</li> <li>14.7 Maritime transport in bulk according to IMO instruments:</li> <li>Transport hazard class(e): Non-applicable</li> <li>14.7 Maritime transport in bulk according to IMO instruments: Non-applicable</li> <li>14.7 Maritime transport in bulk according to IMO instruments: Non-applicable</li> <li>14.7 Maritime transport in bulk according to IMO instruments: Non-applicable</li> <li>14.3 Transport hazard class(e): Non-applicable</li> <li>14.4 Packing group: Non-applicable</li> <li>14.5 Environmental hazards: Non-applicable</li> <li>14.6 Special precautions for user Special precautions f</li></ul>			:	
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14.5       Environmental hazards:       No         14.6       Special precautions for user       Special reculations:       Non-applicable         Tunnel restriction code:       Non-applicable       Non-applicable         Physico-Chemical properties:       section 9         Limited quantities:       Non-applicable         14.7       Maritime transport in bulk according to IMO 40-20:         14.1       UN number or ID number:       Non-applicable         14.2       UM proper shipping name:       Non-applicable         14.3       Transport hazard class(es):       Non-applicable         14.4       Packing group:       Non-applicable         14.5       Maritine pollutant:       No         14.6       Special precautions for user       Non-applicable         14.5       Special precautions for user       Non-applicable         14.6       Special precautions for user       Non-applicable         14.6       Special precautions for user       Non-applicable         14.7       Maritime transport in bulk       Non-applicable         14.8       Maritime transport in bulk       Non-applicable         14.9       Noting to IMAI/CAO 2023:       Non-applicable         14.1       IN number or ID number:       Non-applicabl				
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## SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

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## MB458 - rDNAse

Date of o	compilation: 13/07/2023	Revised: 27/07/2023	Version: 2 (Replaced 1)	
SECT	ION 15: REGULATORY	INFORMATION (continued	)	
	Article 95, REGULATION (I REGULATION (EU) No 649 Seveso III: Non-applicable Limitations to commerce etc): Non-applicable Specific provisions in te It is recommended to use assessments in order to esproduct. Other legislation:	EU) No 528/2012: Non-applicat 0/2012, in relation to the import cialisation and the use of ce erms of protecting people of the information included in this	and export of hazardous chemical pro	nixtures (Annex XVII REACH,
15.2	Chemical safety assess	, ,		
	The supplier has not carrie	ed out evaluation of chemical sa	afety.	
SECT	ION 16: OTHER INFOR	MATION		
	has been designed in acco (COMMISSION REGULATIO <b>Modifications related to</b> Substances that contribute Removed substances Nuclease, deoxyribo <b>Texts of the legislative</b> H334: May cause allergy of <b>Texts of the legislative</b> The phrases indicated do a individual components whi <b>CLP Regulation (EC) No</b> Resp. Sens. 1: H334 - May <b>Advice related to traini</b> Training is recommended i interpretation of this safet <b>Principal bibliographica</b> http://echa.europa.eu http://eur-lex.europa.eu <b>Abbreviations and acro</b> ADR: European agreement	in an official language of the co rdance with ANNEX II-Guide to DN (EU) 2020/878). <b>b the previous Safety Data S</b> <b>c</b> to the classification (SECTION (9003-98-9) <b>phrases mentioned in section</b> <b>a sthma symptoms or breathin</b> <b>phrases mentioned in section</b> <b>to refer to the product itself; t</b> <b>ich appear in section 3</b> <b>b 1272/2008:</b> <b>y cause allergy or asthma symptons:</b> <b>t concerning the international come dangerous goods code ansport Association</b> <b>viation Organisation</b> <b>emand</b> <b>a stop 1</b> <b>b 1</b> <b>c 1</b>	on 2: ng difficulties if inhaled. on 3: hey are present merely for informative toms or breathing difficulties if inhaled sks for staff using this product and to fa	of Regulation (EC) No 1907/2006 managing risks.: purposes and refer to the
		- CONTINU	ED ON NEXT PAGE -	
Date of c	compilation: 13/07/2023	Revised: 27/07/2023	Version: 2 (Replaced 1)	Page 10/11

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### MB458 - rDNAse

Date of compilation: 13/07/2023

Revised: 27/07/2023

Version: 2 (Replaced 1)

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -



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## MB458 - Buffer NMIW1

ate of	compilation: 13/07/2023 Revised: 11/08/2023 Version: 3 (Replaced 2)
SECT	TION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1	Product identifier: MB458 - Buffer NMIW1
	Other means of identification:
	Non-applicable
1.2	Relevant identified uses of the substance or mixture and uses advised against:
	Relevant uses: Laboratory. For professional users only.
	Uses advised against: All uses not specified in this section or in section 7.3
1.3	Details of the supplier of the safety data sheet:
	NZYTech Estrada do Paco do Lumiar Campus do Lumiar - Edif. E, r/c 1649-038 Lisboa - Lisboa - Portugal info@nzytech.com www.nzytech.com
1.4	<b>Emergency telephone number:</b> National Poison Center (Portugal) CIAV: +351 800 250 250; Outside Portugal: Call your regional Poisons Information Service or call local Life Saving Service.
SECT	TION 2: HAZARDS IDENTIFICATION
2.1	Classification of the substance or mixture:
	CLP Regulation (EC) No 1272/2008:
	Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
	Flam. Liq. 3: Flammable liquids, Category 3, H226 Skin Corr. 1: Skin corrosion, Category 1, H314
2.2	Label elements:
	CLP Regulation (EC) No 1272/2008:
	Labelling of packages where the contents do not exceed 125 ml:
	Danger
	Hazard statements:
	Skin Corr. 1: H314 - Causes severe skin burns and eye damage.
	Precautionary statements:
	<ul> <li>P280: Wear protective gloves/face protection/protective clothing/protective footwear.</li> <li>P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</li> <li>P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> </ul>
	Substances that contribute to the classification
	guanidinium thiocyanate
	Authorized substances:
	guanidinium thiocyanate (01-2120735072-65-0001)
2.3	Other hazards:

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

## 3.1 Substance:

Non-applicable

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## MB458 - Buffer NMIW1

Revised: 11/08/2023 Version: 3 (Replaced 2)

Date of compilation: 13/07/2023

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

#### 3.2 Mixture:

Chemical description: Mixture of substances

#### **Components:**

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

	Identification		Chemical name/Classification C			
CAS:		ethanol <sup>(1)</sup>	ATP CLP00			
EC: Index: REACH:	200-578-6 603-002-00-5 01-2119457610-43- XXXX	Regulation 1272/2008	Flam. Liq. 2: H225 - Danger	35 - <55 %		
CAS:		guanidinium thiocyai	nate <sup>(2)</sup> Self-classified			
EC: Index: REACH:	209-812-1 615-030-00-5 Non-applicable	Regulation 1272/2008	Acute Tox. 4: H302+H312+H332; Aquatic Chronic 3: H412; Skin Corr. 1: H314 - Danger 🕴 谷	5 - <10 %		

(1) Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2020/878 (2) Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acut	Genus	
guanidinium thiocyanate	LD50 oral	500 mg/kg (ATEi)	
CAS: 593-84-0	LD50 dermal	1100 mg/kg (ATEi)	
EC: 209-812-1	LC50 inhalation	11 mg/L (ATEi)	

## SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

#### By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

#### By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

#### By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

#### By ingestion/aspiration:

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Keep the person affected at rest.

#### Most important symptoms and effects, both acute and delayed: 4.2

Acute and delayed effects are indicated in sections 2 and 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

#### SECTION 5: FIREFIGHTING MEASURES

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MB458 - Buffer NMIW1 Date of compilation: 13/07/2023 Revised: 11/08/2023 Version: 3 (Replaced 2) SECTION 5: FIREFIGHTING MEASURES (continued) 5.1 Extinguishing media: Suitable extinguishing media: If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO2). Unsuitable extinguishing media: IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent. 5.2 Special hazards arising from the substance or mixture: As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk. 5.3 Advice for firefighters: Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC. Additional provisions: Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium. SECTION 6: ACCIDENTAL RELEASE MEASURES 6.1 Personal precautions, protective equipment and emergency procedures: For non-emergency personnel: Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground. For emergency responders: Wear protective equipment. Keep unprotected persons away. See section 8. 6.2 **Environmental precautions:** It is recommended to avoid environmental spillage of both the product and its container. Methods and material for containment and cleaning up: 6.3 It is recommended: Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13. 6.4 Reference to other sections: See sections 8 and 13. SECTION 7: HANDLING AND STORAGE 7.1 Precautions for safe handling: A.- General precautions for safe use Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used. B.- Technical recommendations for the prevention of fires and explosions

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SEC	TION 7: HANDLING AND STORAGE (continued)						
	Transfer in well ventilated areas, preferably through localized sparks,) and ventilate during cleaning operations. Avoid the inertization systems where possible. Transfer at a slow speed possibility of electrostatic charges: ensure a perfect equipoten clothes made of acrylic fibres, preferably wearing cotton cloth requirements for equipment and systems defined in Directive protecting the security and health of workers under the select 10 for conditions and materials that should be avoided. C Technical recommendations on general occupational hygiene	e existence of dangerous atmospl to avoid the creation of electros ntial connection, always use grou- ning and conductive footwear. Co 2014/34/EC (ATEX 100) and wit tion criteria of Directive 1999/92,	heres inside containers, applying static charges. Against the undings, do not wear work omply with the essential security th the minimum requirements for				
	5 1 75		usta				
	Do not eat or drink during the process, washing hands afterw	ards with suitable cleaning produ	ucis.				
	D Technical recommendations to prevent environmental risks	aco provimity to the product (Co	a subsection 6.2)				
7 7	It is recommended to have absorbent material available at clo		e subsection 6.5)				
7.2	Conditions for safe storage, including any incompatibilitie	25:					
	A Technical measures for storage						
	Store in a cool, dry, well-ventilated location						
	B General conditions for storage						
	Avoid sources of heat, radiation, static electricity and contact	with food. For additional information	ation see subsection 10.5				
7.3	Specific end use(s):						
	Except for the instructions already specified it is not necessary to product.	provide any special recommend	ation regarding the uses of this				
SEC	TION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION						
8.1	Control parameters:						
	Substances whose occupational exposure limits have to be monit legislation):	ored in the workplace (European	OEL, not country-specific				
	There are no applicable occupational exposure limits for the subs	stances contained in the product					
	DNEL (Workers):						
		Short exposure	Long exposure				
	Identification	Customia Local	Customia				

Identification	Systemic	Local	Systemic	Local	
ethanol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 64-17-5	Dermal	Non-applicable	Non-applicable	343 mg/kg	Non-applicable
EC: 200-578-6	Inhalation	Non-applicable	Non-applicable	950 mg/m <sup>3</sup>	Non-applicable

## DNEL (General population):

	Short	exposure	Long exposure		
Identification		Systemic	Local	Systemic	Local
ethanol	Oral	Non-applicable	Non-applicable	87 mg/kg	Non-applicable
CAS: 64-17-5	Dermal	Non-applicable	Non-applicable	206 mg/kg	Non-applicable
EC: 200-578-6	Inhalation	Non-applicable	Non-applicable	114 mg/m <sup>3</sup>	Non-applicable
PNEC:					
Identification					
ethanol	STP	580 mg/L	Fresh water	0,	,96 mg/L
CAS: 64-17-5	Soil	0,63 mg/kg	Marine water	0,	,79 mg/L
EC: 200-578-6	Intermittent	2,75 mg/L	Sediment (Fresh	water) 3	,6 mg/kg
	Oral	0,38 g/kg	Sediment (Marine	e water) 2	,9 mg/kg

## 8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

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ΊΟΝ	8: EXPOSURE	CONTR	OLS/PERSONA	L PROTECT	ION (	continued)			
В	marking>> in acc use, cleaning, ma information see so the labour risk pro- Respiratory protect The use of protect	ordance intenance ubsectior evention ction tion equi	with Regulation e, class of protect n 7.1. All inform services as it is n pment will be ne	(EU) 2016/42 ction,) consu ation containe not known wh	5. For Ilt the i d here ether t	more information on information leaflet p in is a recommendat he company has add	Persc rovide ion wh litiona	t, with the corresponding < <ce onal Protective Equipment (storag d by the manufacturer. For more nich needs some specification fro I measures at its disposal. xposure limits are exceeded.</ce 	
U	Specific protection			Laballia a				Demondue	
	Pictogram		PPE sposable chemical sective gloves	Labelling CAT III	EN 1	CEN Standard 0 374-1:2016+A1:2018 6523-1:2015+A1:2018 IN ISO 21420:2020	manuf the p	Remarks The Breakthrough Time indicated by the acturer must exceed the period during w roduct is being used. Do not use protect ms after the product has come into cont with skin.	
D	As the product is total reliability and Eye and face prot	d has the					rial ca	n not be calculated in advance w	
	Pictogram		PPE	Labelling		CEN Standard		Remarks	
	Mandatory face protection	F	ace shield	CATI		EN 166:2002 EN 167:2002 EN 168:2002 EN ISO 4007:2018		a daily and disinfect periodically according nanufacturer 's instructions. Use if there risk of splashing.	
E	Body protection								
	Pictogram		PPE	Labelling		CEN Standard		Remarks	
	Mandatory complete body protection	protectio risks, w	able clothing for n against chemical ith antistatic and roof properties			EN 1149-1,2,3 13034:2005+A1:2009 EN ISO 13982- 1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994		r professional use only. Clean periodically ording to the manufacturer's instruction	
	Mandatory foot protection	protection risk, with resist	y footwear for n against chemical antistatic and heat ant properties	CAT III		EN ISO 13287:2020 EN ISO 20345:2011 EN 13832-1:2019	Re	eplace boots at any sign of deterioration.	
F	Additional emerge	ency mea	isures						
	Emergency mea	isure	St	andards		Emergency measu	re	Standards	
	Emergency sho	wer		5I Z358-1 11, ISO 3864-4:2	011	Eyewash stations	5	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:201:	
In a spil <b>Vo</b> Wit		ne comm roduct ar <b>mpound</b>	unity legislation nd its container. <b>Is:</b> /75/EU, this proc	For additional	inform	nation see subsectior		mmended to avoid environmenta )	
	V.O.C. density at	20 ºC:		•	',66 a/	L)			
			,•	477,66 kg/m <sup>3</sup> (477,66 g/L)					
	Average carbon n	umber:	2						

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SECT	TION 9: PHYSICAL AND CHEMICAL PROPERTIES	S							
9.1	Information on basic physical and chemical pro	perties:							
	For complete information see the product datasheet.								
	Appearance:								
	Physical state at 20 °C:	Liquid							
	Appearance:	Not available							
	Colour:	Colourless							
	Odour:	Alcohol							
	Odour threshold:	Non-applicable *							
	Volatility:								
	Boiling point at atmospheric pressure:	86 °C							
	Vapour pressure at 20 °C:	3891 Pa							
	Vapour pressure at 50 °C:	19101,02 Pa (19,1 kPa)							
	Evaporation rate at 20 °C:	Non-applicable *							
	Product description:								
	Density at 20 °C:	884,5 kg/m <sup>3</sup>							
	Relative density at 20 °C:	0,885							
	Dynamic viscosity at 20 °C:	1,31 cP							
	Kinematic viscosity at 20 °C:	1,48 mm <sup>2</sup> /s							
	Kinematic viscosity at 40 °C:	Non-applicable *							
	Concentration:	Non-applicable *							
	pH:	6,5 - 7,5 Non applicable *							
	Vapour density at 20 °C: Partition coefficient n-octanol/water 20 °C:	Non-applicable * Non-applicable *							
	Solubility in water at 20 °C:	Non-applicable *							
	Solubility properties:	Non-applicable *							
	Decomposition temperature:	Non-applicable *							
	Melting point/freezing point:	Non-applicable *							
	Flammability:								
	Flash Point:	23 °C							
	Flammability (solid, gas):	Non-applicable *							
	Autoignition temperature:	423 °C							
	Lower flammability limit:	Not available							
	Upper flammability limit:	Not available							
	Particle characteristics:								
	Median equivalent diameter:	Non-applicable							
9.2	Other information:								
	Information with regard to physical hazard clas	ses:							
	Explosive properties:	Non-applicable *							
	Oxidising properties:	Non-applicable *							
	Corrosive to metals:	Non-applicable *							
	Heat of combustion:	Non-applicable *							
	Aerosols-total percentage (by mass) of flammable components:	Non-applicable *							
	Other safety characteristics:								
	*Not relevant due to the nature of the product, not providing info	rmation property of its hazards.							

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Date of compilation: 13/07/2023 Revised: 11/08/2023 Version: 3 (Replaced 2) SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)						
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)						
	Surface tension at 20 °C:		Non-applicable *			
	Refraction index:		Non-applicable *			
*Not relevant due to the nature of the product, not providing information property of its hazards.						
SECT	ION 10: STABILITY AND	REACTIVITY				
10.1	0.1 Reactivity:					
	No hazardous reactions are	expected because the pr	oduct is stable under reco	mmended storage condit	ions. See section 7.	
10.2	Chemical stability:			5		
	Chemically stable under the	indicated conditions of s	torage, handling and use.			
10.3	Possibility of hazardous		5, 5			
	Under the specified condition		that lead to excessive tem	peratures or pressure are	e not expected.	
10.4	Conditions to avoid:	,			·	
	Applicable for handling and	storage at room tempera	ature:			
	Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity	
	Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable	
10.5	5 Incompatible materials:					
	Acids	Water	Oxidising materials	Combustible materials	Others	
	Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases	
10.6	5 Hazardous decomposition products:					
	See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO <sub>2</sub> ), carbon monoxide and other organic compounds.					
SECT	ION 11: TOXICOLOGICA	L INFORMATION				
11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:						
	The experimental information			-	1	
	Dangerous health implic					
	In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure: A- Ingestion (acute effect): - Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as					

- dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.
- B- Inhalation (acute effect):
  - Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
  - Corrosivity/Irritability: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract
- C- Contact with the skin and the eyes (acute effect):
  - Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. -For more information on the secondary effects see section 2.
  - Contact with the eyes: Produces serious eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

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ION 11: TOXICOLOGICAL	INFORMATION (continued)	)		
as hazardous for the effect IARC: ethanol (1)	on available data, the classificat ts mentioned. For more informa available data, the classification	tion see section 3.		
<ul><li>hazardous for this effect.</li><li>Reproductive toxicity: I</li></ul>	For more information see section Based on available data, the class this effect. For more information	n 3. ssification criteria are not m		
hazardous with sensitising - Skin: Based on availabl hazardous for this effect.	available data, the classification effects. For more information s e data, the classification criteria For more information see section ity (STOT) - single exposure:	ee section 3. are not met, as it does not		
<ul> <li>F- Specific target organ toxicity (STOT) - single exposure:</li> <li>Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous this effect. For more information see section 3.</li> <li>G- Specific target organ toxicity (STOT)-repeated exposure:</li> </ul>			azardous f	
it does not contain substa - Skin: Based on availabl	exicity (STOT)-repeated exposur nces classified as hazardous for e data, the classification criteria For more information see section	this effect. For more inform are not met, as it does not	ation see section 3.	
Based on available data, t this effect. For more inform <b>Other information:</b>	he classification criteria are not mation see section 3.	met, as it does not contain	substances classified as h	azardous f
Non-applicable				
Non-applicable	ation on the substances.			
Non-applicable Specific toxicology inform			Aguto toxicity	Copu
Specific toxicology inform	ation on the substances: Identification		Acute toxicity	Genu
Specific toxicology inform guanidinium thiocyanate		LD50 oral	500 mg/kg (ATEi)	Genu
Specific toxicology inform guanidinium thiocyanate CAS: 593-84-0		LD50 dermal	500 mg/kg (ATEi) 1100 mg/kg (ATEi)	Genu
guanidinium thiocyanate CAS: 593-84-0 EC: 209-812-1		LD50 dermal LC50 inhalation	500 mg/kg (ATEi) 1100 mg/kg (ATEi) 11 mg/L (ATEi)	
Specific toxicology inform guanidinium thiocyanate CAS: 593-84-0 EC: 209-812-1 ethanol		LD50 dermal LC50 inhalation LD50 oral	500 mg/kg (ATEi)           1100 mg/kg (ATEi)           11 mg/L (ATEi)           6200 mg/kg	Rat
guanidinium thiocyanate CAS: 593-84-0 EC: 209-812-1		LD50 dermal LC50 inhalation	500 mg/kg (ATEi) 1100 mg/kg (ATEi) 11 mg/L (ATEi)	Rat
guanidinium thiocyanate CAS: 593-84-0 EC: 209-812-1 ethanol CAS: 64-17-5	Identification	LD50 dermal LC50 inhalation LD50 oral LD50 dermal	500 mg/kg (ATEi)           1100 mg/kg (ATEi)           11 mg/L (ATEi)           6200 mg/kg           20000 mg/kg	Rat
Specific toxicology inform guanidinium thiocyanate CAS: 593-84-0 EC: 209-812-1 ethanol CAS: 64-17-5 EC: 200-578-6	Identification	LD50 dermal LC50 inhalation LD50 oral LD50 dermal	500 mg/kg (ATEi)           1100 mg/kg (ATEi)           11 mg/L (ATEi)           6200 mg/kg           20000 mg/kg	Rat Rabb Rat
Specific toxicology inform guanidinium thiocyanate CAS: 593-84-0 EC: 209-812-1 ethanol CAS: 64-17-5 EC: 200-578-6	Identification TE mix):	LD50 dermal LC50 inhalation LD50 oral LD50 dermal LC50 inhalation	500 mg/kg (ATEi)           1100 mg/kg (ATEi)           11 mg/L (ATEi)           6200 mg/kg           20000 mg/kg           124,7 mg/L (4 h)	Genu: Rat Rabbi Rat vn toxicity

#### 11.2 Information on other hazards:

#### **Endocrine disrupting properties**

Endocrine-disrupting properties: The product does not meet the criteria.

## **Other information**

Non-applicable

Inhalation

## SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

122,22 mg/L (4 h) (Calculation method)

0 %

12.1 Toxicity:

## Acute toxicity:

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ECT	TON 12: ECOLOGICAL INFORM	ATION <u>(conti</u>	nued)					
					_		_	
		Identification		Concentration		Spec		Genus
	ethanol CAS: 64-17-5		LC50	11000 mg/L (96 h)		Alburnus		Fish
			EC50	9268 mg/L (48 h)		Daphnia		Crustacean
	EC: 200-578-6		EC50	1450 mg/L (192 h)	<u>.                                    </u>	Microcystis a	erugino	
	guanidinium thiocyanate		LC50	>10 - 100 mg/L (96 h				Fish
	CAS: 593-84-0		EC50	>10 - 100 mg/L (48 h	-			Crustacean
	EC: 209-812-1		EC50	>10 - 100 mg/L (72 h	)			Algae
	Chronic toxicity:							Genus
	Identification		NOEC	Concentration			Species	
	ethanol CAS: 64-17-5 EC: 200-578-6		NOEC	250 mg/L 2 mg/L		Danio Ceriodaphi		Fish Crustacean
2.2	Persistence and degradability:		NOLC	2 119/2		centradphi		Clustacedin
	Substance-specific information:	1						
	Identification		D	egradability		Bio	legradat	bility
	ethanol	1	BOD5	Non-applicable	Con	centration		100 mg/L
	CAS: 64-17-5	(	COD	Non-applicable	Peri	od		14 days
	EC: 200-578-6	1	BOD5/COD	Non-applicable	% E	Biodegradable		89 %
2.3	Bioaccumulative potential:			-				-
	Identification			BCF		CF	Bioaccumulation potential 3	
	CAS: 64-17-5					low Log	-0.31	
<b>~</b> 4	EC: 200-578-6					otential	Low	
2.4	Mobility in soil:							
	Identification		Absorption/desorption			Volat		
	Identification		710.					
	ethanol	-	Кос	1		Henry		4,61E-1 Pa·m <sup>3</sup> /mol
	ethanol CAS: 64-17-5	(	Koc Conclusion	1 Very High		Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
	ethanol CAS: 64-17-5 EC: 200-578-6	(	Кос	1 Very High	5 ºC)			4,61E-1 Pa·m <sup>3</sup> /mol
2.5	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b>	ment:	Koc Conclusion	1 Very High	5 °C)	Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b> Product does not meet PBT/vPvB cr	ment: iteria	Koc Conclusion	1 Very High	5 °C)	Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b> Product does not meet PBT/vPvB cr <b>Endocrine disrupting properties</b>	ment: iteria ::	Koc Conclusion Surface tensior	1 Very High 2,339E-2 N/m (2	5 °C)	Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
2.6	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b> Product does not meet PBT/vPvB cr <b>Endocrine disrupting properties</b> Endocrine-disrupting properties: The	ment: iteria ::	Koc Conclusion Surface tensior	1 Very High 2,339E-2 N/m (2	5 °C)	Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
2.6	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b> Product does not meet PBT/vPvB cr <b>Endocrine disrupting properties</b>	ment: iteria ::	Koc Conclusion Surface tensior	1 Very High 2,339E-2 N/m (2	5 °C)	Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
2.6	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b> Product does not meet PBT/vPvB cr <b>Endocrine disrupting properties</b> Endocrine-disrupting properties: The	ment: iteria ::	Koc Conclusion Surface tensior	1 Very High 2,339E-2 N/m (2	5 °C)	Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
2.6	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b> Product does not meet PBT/vPvB cri <b>Endocrine disrupting properties</b> Endocrine-disrupting properties: The <b>Other adverse effects:</b>	ment: iteria ::	Koc Conclusion Surface tensior	1 Very High 2,339E-2 N/m (2	5 °C)	Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
2.6	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b> Product does not meet PBT/vPvB cri <b>Endocrine disrupting properties</b> Endocrine-disrupting properties: The <b>Other adverse effects:</b>	ment: iteria :: e product does	Koc Conclusion Surface tensior	1 Very High 2,339E-2 N/m (2	5 °C)	Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
2.6 2.7 ECT	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b> Product does not meet PBT/vPvB cri <b>Endocrine disrupting properties</b> Endocrine-disrupting properties: The <b>Other adverse effects:</b> Not described	ment: iteria :: e product does	Koc Conclusion Surface tensior	1 Very High 2,339E-2 N/m (2	5 °C)	Dry soil		4,61E-1 Pa·m <sup>3</sup> /mol Yes
2.6 2.7 ECT	ethanol CAS: 64-17-5 EC: 200-578-6 <b>Results of PBT and vPvB assess</b> Product does not meet PBT/vPvB cr <b>Endocrine disrupting properties</b> Endocrine-disrupting properties: The <b>Other adverse effects:</b> Not described	ment: iteria :: e product does	Koc Conclusion Surface tension not meet th Description	1 Very High 2,339E-2 N/m (2 e criteria.		Dry soil Moist soil	ste class	4,61E-1 Pa·m <sup>3</sup> /mol Yes

#### Type of waste (Regulation (EU) No 1357/2014):

HP8 Corrosive, HP3 Flammable

### Waste management (disposal and evaluation):

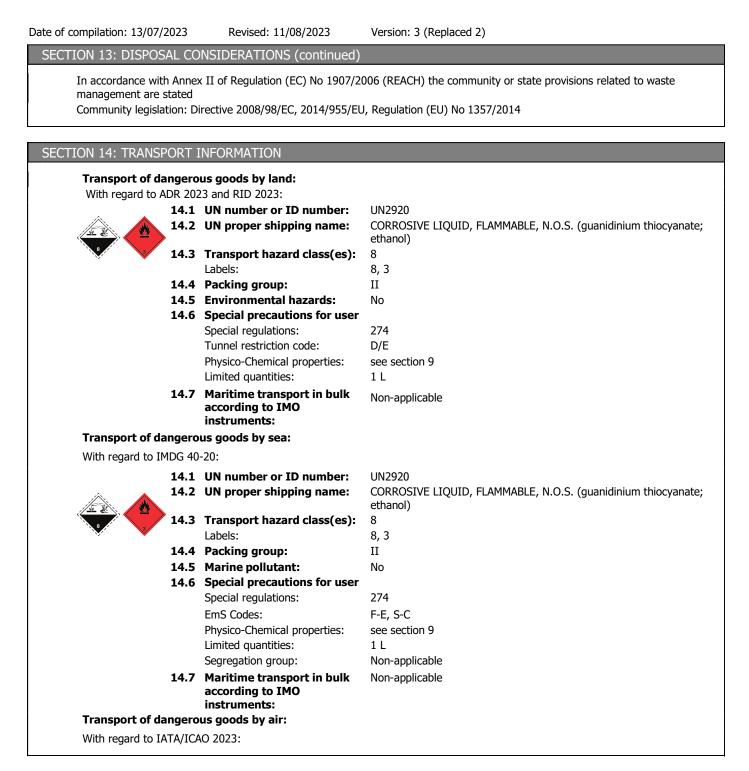
Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

### Regulations related to waste management:

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SECTION 14: TRANSPOR	INFORMATION (continued)	
	<ol> <li>UN number or ID number:</li> <li>UN proper shipping name:</li> </ol>	UN2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (guanidinium thiocyanate; ethanol)
14.	<b>Transport hazard class(es):</b> Labels:	8 8, 3
14.	4 Packing group:	II
14.	5 Environmental hazards:	No
14.	6 Special precautions for user	
	Physico-Chemical properties:	see section 9
14.	7 Maritime transport in bulk according to IMO instruments:	Non-applicable

## SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: ethanol (Product-type 1, 2, 4)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

### Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5000	50000

# Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):

Shall not be used in:

-ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,

-tricks and jokes,

-games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

#### Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

#### Other legislation:

The product could be affected by sectorial legislation

#### 15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

#### SECTION 16: OTHER INFORMATION

#### Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

## Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

#### Texts of the legislative phrases mentioned in section 2:

H314: Causes severe skin burns and eye damage.

H226: Flammable liquid and vapour.

#### Texts of the legislative phrases mentioned in section 3:

This SDS is an English translation of COMMISSION REGULATION (EU) 2020/878, without any country-specific legislation

## MB458 - Buffer NMIW1

Date of compilation: 13/07/2023	Revised: 11/08/2023	Version: 3 (Replaced 2)					
SECTION 16: OTHER INFORM	1ATION (continued)						
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3							
Acute Tox. 4: H302+H312- Aquatic Chronic 3: H412 - Flam. Liq. 2: H225 - Highly	<b>CLP Regulation (EC) No 1272/2008:</b> Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled. Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects. Flam. Liq. 2: H225 - Highly flammable liquid and vapour. Skin Corr. 1: H314 - Causes severe skin burns and eye damage.						
Skin Corr. 1: Calculation me	<b>Classification procedure:</b> Skin Corr. 1: Calculation method Flam. Liq. 3: Calculation method (2.6.4.3)						
Training is recommended in	Advice related to training: Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension ar interpretation of this safety data sheet, as well as the label on the product.						
	Principal bibliographical sources: http://echa.europa.eu						
IMDG: International maritin IATA: International Air Tran ICAO: International Civil Av COD: Chemical Oxygen Der BOD5: 5day biochemical ox BCF: Bioconcentration facto LD50: Lethal Dose 50 LC50: Lethal Concentration EC50: Effective concentrati LogPOW: Octanolwater par Koc: Partition coefficient of	concerning the international ne dangerous goods code isport Association iation Organisation mand ygen demand or 50 50 50 50 tition coefficient organic carbon	l carriage of dangerous goods by road					
UFI: unique formula identif IARC: International Agency							

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.