


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

- 1.1 Product identifier:** NE265510 - NEROL AUTO LIQUIDO DE FRENOS DOT 5.1 A.B.S.
Other means of identification:
UFI: P050-80AR-000G-6SU7
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant uses: Brake fluid
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:**
Nerol Lubricants, S.L.
Ctra. de Mazarrón Km. 3 - Cartagena
30393 Murcia - Murcia - España
Phone: +34911271060
info@lubricantsnerol.com
www.lubricantsnerol.com
- 1.4 Emergency telephone number:** (+353) 01 809 2166 (8 am. 10 pm)
EUROPE : +44 (0) 1235 239 670

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. 4: Acute toxicity if swallowed, Category 4, H302
Eye Irrit. 2: Eye irritation, Category 2, H319
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
Warning

Hazard statements:
Acute Tox. 4: H302 - Harmful if swallowed.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Precautionary statements:
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P264: Wash thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/protective footwear.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330: Rinse mouth.
P337+P313: If eye irritation persists: Get medical advice/attention.
P501: Dispose of contents/container according to the separated collection system used in your municipality.
Substances that contribute to the classification
2,2'-oxybisethanol; Ethanediol
UFI: P050-80AR-000G-6SU7
- 2.3 Other hazards:**
Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substance:**
Non-applicable

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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	Concentration
CAS: 9004-77-7 EC: Non-applicable Index: Non-applicable REACH: 01-2119484615-38-XXXX	Poly(ethylene glycol) butyl ether⁽¹⁾ Regulation 1272/2008 Eye Irrit. 2: H319 - Warning	Self-classified 25 - <50 %
CAS: 143-22-6 EC: 205-592-6 Index: 603-183-00-0 REACH: 01-2119475107-38-XXXX	2-[2-(2-butoxyethoxy)ethoxy]ethanol⁽¹⁾ Regulation 1272/2008 Eye Dam. 1: H318 - Danger	ATP CLP00 25 - <50 %
CAS: 111-46-6 EC: 203-872-2 Index: 603-140-00-6 REACH: 01-2119457857-21-XXXX	2,2'-oxybisethanol⁽¹⁾ Regulation 1272/2008 Acute Tox. 4: H302 - Warning	ATP CLP00 10 - <25 %
CAS: 107-21-1 EC: 203-473-3 Index: 603-027-00-1 REACH: 01-2119456816-28-XXXX	Ethenediol⁽¹⁾ Regulation 1272/2008 Acute Tox. 4: H302 - Warning	ATP CLP00 10 - <25 %
CAS: 111-77-3 EC: 203-906-6 Index: 603-107-00-6 REACH: 01-2119475100-52-XXXX	2-(2-methoxyethoxy)ethanol⁽¹⁾ Regulation 1272/2008 Repr. 1B: H360D - Danger	ATP ATP18 1 - <2,5 %
CAS: 110-97-4 EC: 203-820-9 Index: 603-083-00-7 REACH: 01-2119475444-34-XXXX	1,1'-iminodipropan-2-ol⁽¹⁾ Regulation 1272/2008 Eye Irrit. 2: H319 - Warning	ATP CLP00 1 - <2,5 %
CAS: 112-34-5 EC: 203-961-6 Index: 603-096-00-8 REACH: 01-2119475104-44-XXXX	2-(2-butoxyethoxy)ethanol⁽¹⁾ Regulation 1272/2008 Eye Irrit. 2: H319 - Warning	ATP CLP00 1 - <2,5 %

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

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:

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

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:

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**SECTION 4: FIRST AID MEASURES (continued)**

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. 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.

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:**

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 spilled 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:

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:**

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SECTION 7: HANDLING AND STORAGE (continued)

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

Minimum Temp.: 5 °C
 Maximum Temp.: 30 °C
 Maximum time: 6 Months

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:

EH40/2005 Workplace exposure limits, fourth edition, published 2020:

Identification	Occupational exposure limits		
	WEL (8h)	WEL (15 min)	WEL (8h)
2,2' -oxybisethanol CAS: 111-46-6 EC: 203-872-2	23 ppm	101 mg/m ³	
Ethanediol CAS: 107-21-1 EC: 203-473-3	20 ppm	52 mg/m ³	40 ppm
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	10 ppm	50,1 mg/m ³	
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	10 ppm	67,5 mg/m ³	15 ppm

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-[2-(2-butoxyethoxy)ethoxy]ethanol CAS: 143-22-6 EC: 205-592-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	208 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	195 mg/m ³	Non-applicable
2,2' -oxybisethanol CAS: 111-46-6 EC: 203-872-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	43 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	44 mg/m ³	60 mg/m ³
Ethanediol CAS: 107-21-1 EC: 203-473-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	106 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	35 mg/m ³
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	2,22 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	50,1 mg/m ³	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
1,1'-iminodipropan-2-ol CAS: 110-97-4 EC: 203-820-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	6,4 mg/m ³	Non-applicable
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	83 mg/kg	Non-applicable
	Inhalation	Non-applicable	101,2 mg/m ³	67,5 mg/m ³	67,5 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-[2-(2-butoxyethoxy)ethoxy]ethanol CAS: 143-22-6 EC: 205-592-6	Oral	Non-applicable	Non-applicable	12,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	125 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	117 mg/m ³	Non-applicable
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	21 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	12 mg/m ³	12 mg/m ³
Ethandiol CAS: 107-21-1 EC: 203-473-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	53 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	7 mg/m ³
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	Oral	Non-applicable	Non-applicable	7,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,33 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	30,1 mg/m ³	Non-applicable
1,1'-iminodipropan-2-ol CAS: 110-97-4 EC: 203-820-9	Oral	Non-applicable	Non-applicable	1,3 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	6,3 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3,9 mg/m ³	Non-applicable
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	Oral	Non-applicable	Non-applicable	5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	50 mg/kg	Non-applicable
	Inhalation	Non-applicable	60,7 mg/m ³	40,5 mg/m ³	40,5 mg/m ³

PNEC:

Identification					
2-[2-(2-butoxyethoxy)ethoxy]ethanol CAS: 143-22-6 EC: 205-592-6	STP	200 mg/L	Fresh water	2 mg/L	
	Soil	0,47 mg/kg	Marine water	0,2 mg/L	
	Intermittent	8,4 mg/L	Sediment (Fresh water)	7,7 mg/kg	
	Oral	0,111 g/kg	Sediment (Marine water)	0,77 mg/kg	
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	STP	199,5 mg/L	Fresh water	10 mg/L	
	Soil	1,53 mg/kg	Marine water	1 mg/L	
	Intermittent	10 mg/L	Sediment (Fresh water)	20,9 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	2,09 mg/kg	
Ethandiol CAS: 107-21-1 EC: 203-473-3	STP	199,5 mg/L	Fresh water	10 mg/L	
	Soil	1,53 mg/kg	Marine water	1 mg/L	
	Intermittent	10 mg/L	Sediment (Fresh water)	37 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	3,7 mg/kg	
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	STP	10000 mg/L	Fresh water	12 mg/L	
	Soil	2,1 mg/kg	Marine water	1,2 mg/L	
	Intermittent	12 mg/L	Sediment (Fresh water)	44,4 mg/kg	
	Oral	0,09 g/kg	Sediment (Marine water)	0,44 mg/kg	
1,1'-iminodipropan-2-ol CAS: 110-97-4 EC: 203-820-9	STP	15000 mg/L	Fresh water	0,278 mg/L	
	Soil	0,303 mg/kg	Marine water	0,028 mg/L	
	Intermittent	2,777 mg/L	Sediment (Fresh water)	2,33 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	0,233 mg/kg	

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	STP	200 mg/L	Fresh water	1,1 mg/L
	Soil	0,32 mg/kg	Marine water	0,11 mg/L
	Intermittent	11 mg/L	Sediment (Fresh water)	4,4 mg/kg
	Oral	0,056 g/kg	Sediment (Marine water)	0,44 mg/kg

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	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0,062 mm)		EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

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	Panoramic glasses against splash/projections.		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			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.
	Anti-slip work shoes		EN ISO 20347:2012	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 20345:2012 y EN 13832-1:2007

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply): 2,22 % weight

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

V.O.C. density at 20 °C:	23,4 kg/m ³ (23,4 g/L)
Average carbon number:	5
Average molecular weight:	120,1 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Fluid
Colour:	 Amber
Odour:	Soft
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	275 °C
Vapour pressure at 20 °C:	3 Pa
Vapour pressure at 50 °C:	35,73 Pa (0,04 kPa)
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	1054 kg/m ³
Relative density at 20 °C:	1,05
Dynamic viscosity at 20 °C:	2,69 cP
Kinematic viscosity at 20 °C:	2,62 mm ² /s
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	7 - 9 (at 100 %)
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:	Highly water-soluble
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

Flammability:

Flash Point:	128 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	300 °C
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

Particle characteristics:

Median equivalent diameter:	Non-applicable
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9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
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*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

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 information 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	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

11.1 Information on toxicological effects:

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

Contains glycols. It is recommended not to breathe the vapours for prolonged periods of time due to the possibility of effects that are hazardous to the health .

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 : The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- 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: 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.

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

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- 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: 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. However, it does 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, as it does not contain substances classified as hazardous for this effect. 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:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
2-[2-(2-butoxyethoxy)ethoxy]ethanol CAS: 143-22-6 EC: 205-592-6	LD50 oral	5170 mg/kg	Rat
	LD50 dermal	3480 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	LD50 oral	500 mg/kg	Rat
	LD50 dermal	11890 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
Ethanediol CAS: 107-21-1 EC: 203-473-3	LD50 oral	500 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	LD50 oral	7128 mg/kg	Rat
	LD50 dermal	9404 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
1,1'-iminodipropan-2-ol CAS: 110-97-4 EC: 203-820-9	LD50 oral	4765 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	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:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
	LC50			
2-[2-(2-butoxyethoxy)ethoxy]ethanol CAS: 143-22-6 EC: 205-592-6	LC50	2400 mg/L (96 h)	Pimephales promelas	Fish
	EC50	3200 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	LC50	32000 mg/L (96 h)	Gambusia affinis	Fish
	EC50	84000 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
Ethanediol CAS: 107-21-1 EC: 203-473-3	LC50	53000 mg/L (96 h)	Pimephales promelas	Fish
	EC50	51000 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	24000 mg/L (168 h)	Selenastrum capricornutum	Algae
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	LC50	5741 mg/L (96 h)	Pimephales promelas	Fish
	EC50	1192 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	LC50	1300 mg/L (96 h)	Lepomis macrochirus	Fish
	EC50	2850 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	53 mg/L (192 h)	Microcystis aeruginosa	Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
	NOEC			
2-[2-(2-butoxyethoxy)ethoxy]ethanol CAS: 143-22-6 EC: 205-592-6	NOEC	Non-applicable		
	NOEC	100 mg/L	Daphnia magna	Crustacean
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	NOEC	Non-applicable		
	NOEC	8590 mg/L	Ceriodaphnia dubia	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
2-[2-(2-butoxyethoxy)ethoxy]ethanol CAS: 143-22-6 EC: 205-592-6	BOD5	0,3 g O2/g	Concentration	10 mg/L
	COD	1,83 g O2/g	Period	14 days
	BOD5/COD	0,16	% Biodegradable	88 %
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	BOD5	0,05 g O2/g	Concentration	100 mg/L
	COD	1,51 g O2/g	Period	28 days
	BOD5/COD	0,03	% Biodegradable	90 %
Ethanediol CAS: 107-21-1 EC: 203-473-3	BOD5	0,47 g O2/g	Concentration	100 mg/L
	COD	1,29 g O2/g	Period	14 days
	BOD5/COD	0,36	% Biodegradable	90 %
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	100 %
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	BOD5	0,25 g O2/g	Concentration	100 mg/L
	COD	2,08 g O2/g	Period	28 days
	BOD5/COD	0,12	% Biodegradable	92 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
2-[2-(2-butoxyethoxy)ethoxy]ethanol CAS: 143-22-6 EC: 205-592-6	BCF	3
	Pow Log	0,62
	Potential	Low
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	BCF	0
	Pow Log	-1,47
	Potential	Low
Ethanediol CAS: 107-21-1 EC: 203-473-3	BCF	10
	Pow Log	-1,36
	Potential	Low

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
	BCF	Pow Log
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	3	-1,18
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	0,46	0,56
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	Koc	Conclusion	Henry	Conclusion
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	1	Very High	2,06E-4 Pa·m ³ /mol	No
	Surface tension	4,954E-2 N/m (25 °C)	Moist soil	No
Ethanediol CAS: 107-21-1 EC: 203-473-3	0	Very High	1,327E-1 Pa·m ³ /mol	No
	Surface tension	4,989E-2 N/m (25 °C)	Moist soil	No
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	1	Very High	1,621E-6 Pa·m ³ /mol	Non-applicable
	Surface tension	3,59E-2 N/m (25 °C)	Moist soil	No
1,1'-iminodipropan-2-ol CAS: 110-97-4 EC: 203-820-9	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Surface tension	1,619E-2 N/m (221,93 °C)	Moist soil	Non-applicable
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	48	Very High	7,2E-9 Pa·m ³ /mol	No
	Surface tension	3,395E-2 N/m (25 °C)	Moist soil	No

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 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):

HP6 Acute Toxicity, HP10 Toxic for reproduction, 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, The Waste Regulations 2011, 2011 No. 988). As under 15 01 (2014/955/EU) 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

This product is not regulated for transport (ADR/RID,IMDG,IATA)

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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

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:

Non-applicable

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

Contains more than 0,1 % of 2-(2-methoxyethoxy)ethanol by weight. Shall not be placed on the market after 27 June 2010, for supply to the general public, as a constituent of paints, paint strippers, cleaning agents, selfshining emulsions or floor sealants in concentrations equal to or greater than 0,1 % by weight.

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 Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885

Control of Substances Hazardous to Health Regulations 2002 (as amended)

EH40/2005 Workplace exposure limits

The Waste Regulations 2011, 2011 No. 988

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:

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 (Regulation (EC) No 2015/830)

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.

H302: Harmful if swallowed.

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. 4: H302 - Harmful if swallowed.

Eye Dam. 1: H318 - Causes serious eye damage.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Repr. 1B: H360D - May damage the foetus.

Classification procedure:

Eye Irrit. 2: Calculation method

Acute Tox. 4: Calculation method

Advice related to training:

- CONTINUED ON NEXT PAGE -

**SECTION 16: OTHER INFORMATION (continued)**

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.

- END OF SAFETY DATA SHEET -