



DOT 4

Date of compilation: 02/04/2024 Version: 1

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

- 1.1 Product identifier:** DOT 4
Other means of identification:
UFI: XUJP-M2NA-000T-JK47
- 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:**
AUTOLAND PROSTA SPÓŁKA AKCYJNA
Ogrodowa 37
00-873 Warszawa - Poland
Phone: 0048-32-47 22 531
autoland_hse@autoland.pl
<http://autoland.pl>
- 1.4 Emergency telephone number:**

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
Repr. 2: Reproductive toxicity, Category 2, H361d
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
Warning
-  
- Hazard statements:**
Acute Tox. 4: H302 - Harmful if swallowed.
Repr. 2: H361d - Suspected of damaging the unborn child.
- Precautionary statements:**
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P201: Obtain special instructions before use.
P280: Wear protective gloves.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P501: Dispose of contents and / or their container according to the separated collection system used in your municipality.
- Substances that contribute to the classification**
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate; 2,2'-oxybisethanol
- UFI:** XUJP-M2NA-000T-JK47
The product packaging must include: tactile warning.
- 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:**

DOT 4

Date of compilation: 02/04/2024





Version: 1

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

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: 30989-05-0 EC: 250-418-4 Index: Non-applicable REACH: 01-2119462824-33-XXXX	Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate⁽¹⁾ Regulation 1272/2008 Repr. 2: H361d - Warning	Self-classified  30 - <70 %
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  30 - <70 %
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 - <3 %
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. 2: H361d - Warning	Self-classified  1 - <3 %

⁽¹⁾ 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
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	LD50 oral	500 mg/kg	Rat
	LD50 dermal	Not relevant	
	LC50 inhalation	Not relevant	

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 water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspiration:

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:

Not relevant

DOT 4

Date of compilation: 02/04/2024 Version: 1

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 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:

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

DOT 4

Date of compilation: 02/04/2024 Version: 1

SECTION 7: HANDLING AND STORAGE (continued)

PREGNANT WOMEN SHOULD NOT BE EXPOSED TO THIS PRODUCT. Transfer in designated areas that comply with the necessary safety conditions (emergency showers and eyewash stations in close proximity), using personal protection equipment, especially on the hands and face (See section 8). Limit manual transfers to small amounts only. 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.- Specific storage requirements

Minimum Temp.: 0 °C

Maximum Temp.: 25 °C

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:

2021 Code of Practice for the Chemical Agents Regulations:

Identification	Occupational exposure limits		
2,2' -oxybisethanol CAS: 111-46-6 EC: 203-872-2	OEL (8h)	23 ppm	100 mg/m ³
	OEL (15 min)		
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	OEL (8h)	10 ppm	67.5 mg/m ³
	OEL (15 min)	15 ppm	101.2 mg/m ³
2-(2-methoxyethoxy)ethanol ⁽¹⁾ CAS: 111-77-3 EC: 203-906-6	OEL (8h)	10 ppm	50.1 mg/m ³
	OEL (15 min)		

⁽¹⁾ Skin

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate CAS: 30989-05-0 EC: 250-418-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	8.3 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	29.1 mg/m ³	Not relevant
2,2' -oxybisethanol CAS: 111-46-6 EC: 203-872-2	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	43 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	44 mg/m ³	60 mg/m ³
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	83 mg/kg	Not relevant
	Inhalation	Not relevant	101.2 mg/m ³	67.5 mg/m ³	67.5 mg/m ³
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	2.22 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	50.1 mg/m ³	Not relevant

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate CAS: 30989-05-0 EC: 250-418-4	Oral	Not relevant	Not relevant	4.1 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	4.1 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	7.2 mg/m ³	Not relevant

- CONTINUED ON NEXT PAGE -

DOT 4

Date of compilation: 02/04/2024 Version: 1

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	21 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	12 mg/m ³	12 mg/m ³
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	Oral	Not relevant	Not relevant	5 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	50 mg/kg	Not relevant
	Inhalation	Not relevant	60.7 mg/m ³	40.5 mg/m ³	40.5 mg/m ³
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	Oral	Not relevant	Not relevant	7.5 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	1.33 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	30.1 mg/m ³	Not relevant

PNEC:



Identification					
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate CAS: 30989-05-0 EC: 250-418-4	STP	100 mg/L	Fresh water	0.211 mg/L	
	Soil	0.028 mg/kg	Marine water	0.021 mg/L	
	Intermittent	2.112 mg/L	Sediment (Fresh water)	0.76 mg/kg	
	Oral	Not relevant	Sediment (Marine water)	0.076 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	Not relevant	Sediment (Marine water)	2.09 mg/kg	
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	
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	

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 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





DOT 4

Date of compilation: 02/04/2024 Version: 1



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield		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

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks		EN 13034:2005+A1:2009 EN 168:2002 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2013 EN ISO 6530:2005 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk		EN ISO 20345:2011 EN 13832-1:2019	Replace boots at any sign of deterioration.

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):	1.5 % weight
V.O.C. density at 20 °C:	16.29 kg/m ³ (16.29 g/L)
Average carbon number:	5
Average molecular weight:	120.15 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
Color:	Light yellow
Odor:	Not available
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	193 - 345 °C
Vapour pressure at 20 °C:	2 Pa
Vapour pressure at 50 °C:	24.81 Pa (0.02 kPa)
Evaporation rate at 20 °C:	Not relevant *

*Not relevant due to the nature of the product, not providing information property of its hazards.

- CONTINUED ON NEXT PAGE -

DOT 4

Date of compilation: 02/04/2024

Version: 1

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Product description:

Density at 20 °C:	1086.3 kg/m ³
Relative density at 20 °C:	1.086
Dynamic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	7 - 10
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *

Flammability:

Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	204 °C
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *

Particle characteristics:

Median equivalent diameter:	Non-applicable
-----------------------------	----------------

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

Other safety characteristics:

Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

*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 from Safety Data Sheet.

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:

DOT 4

Date of compilation: 02/04/2024 Version: 1

SECTION 10: STABILITY AND REACTIVITY (continued)

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 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

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):

- 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: 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.

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: Not relevant
- 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: Suspected of damaging the unborn child.

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.

- CONTINUED ON NEXT PAGE -

DOT 4

Date of compilation: 02/04/2024 Version: 1

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate CAS: 30989-05-0 EC: 250-418-4	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L	
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	LD50 oral	500 mg/kg (ATEi)	Rat
	LD50 dermal	11890 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L	
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L	
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	>20 mg/L	

11.2 Information on other hazards:

Endocrine disrupting properties

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

Other information

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

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

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.

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate CAS: 30989-05-0 EC: 250-418-4	LC50	222 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	211 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Not relevant		
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	Not relevant		
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
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	>500 mg/L (72 h)	Desmodesmus subspicatus	Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	NOEC	Not relevant		
	NOEC	8590 mg/L	Ceriodaphnia dubia	Crustacean

- CONTINUED ON NEXT PAGE -

DOT 4

Date of compilation: 02/04/2024 Version: 1

SECTION 12: ECOLOGICAL INFORMATION (continued)

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate CAS: 30989-05-0 EC: 250-418-4	BOD5	Not relevant	Concentration	39 mg/L
	COD	Not relevant	Period	10 days
	BOD5/COD	Not relevant	% Biodegradable	70 %
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	BOD5	0.05 g O ₂ /g	Concentration	100 mg/L
	COD	1.51 g O ₂ /g	Period	28 days
	BOD5/COD	0.03	% Biodegradable	90 %
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	BOD5	0.25 g O ₂ /g	Concentration	100 mg/L
	COD	2.08 g O ₂ /g	Period	28 days
	BOD5/COD	0.12	% Biodegradable	92 %
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	BOD5	Not relevant	Concentration	59.2 mg/L
	COD	Not relevant	Period	28 days
	BOD5/COD	Not relevant	% Biodegradable	100 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	BCF	0
	Pow Log	-1.47
	Potential	Low
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	BCF	0.46
	Pow Log	0.56
	Potential	Low
2-(2-methoxyethoxy)ethanol CAS: 111-77-3 EC: 203-906-6	BCF	
	Pow Log	-0.47
	Potential	

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate CAS: 30989-05-0 EC: 250-418-4	Koc	0.01	Henry	Not relevant
	Conclusion	Very High	Dry soil	Not relevant
	Surface tension	Not relevant	Moist soil	Not relevant
2,2'-oxybisethanol CAS: 111-46-6 EC: 203-872-2	Koc	1	Henry	2.06E-4 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	No
	Surface tension	4.954E-2 N/m (25 °C)	Moist soil	No
2-(2-butoxyethoxy)ethanol CAS: 112-34-5 EC: 203-961-6	Koc	48	Henry	7.2E-9 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	No
	Surface tension	3.395E-2 N/m (25 °C)	Moist soil	No

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:

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

HP6 Acute Toxicity, HP10 Toxic for reproduction

DOT 4

Date of compilation: 02/04/2024 Version: 1

SECTION 13: DISPOSAL CONSIDERATIONS (continued)

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/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-hazardous 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: | Not relevant |
| 14.2 UN proper shipping name: | Not relevant |
| 14.3 Transport hazard class(es): | Not relevant |
| Labels: | Not relevant |
| 14.4 Packing group: | Not relevant |
| 14.5 Environmental hazards: | No |
| 14.6 Special precautions for user | |
| Special regulations: | Not relevant |
| Tunnel restriction code: | Not relevant |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | Not relevant |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

Transport of dangerous goods by sea:

With regard to IMDG 41-22:

- | | |
|--|---------------|
| 14.1 UN number or ID number: | Not relevant |
| 14.2 UN proper shipping name: | Not relevant |
| 14.3 Transport hazard class(es): | Not relevant |
| Labels: | Not relevant |
| 14.4 Packing group: | Not relevant |
| 14.5 Marine pollutant: | No |
| 14.6 Special precautions for user | |
| Special regulations: | Not relevant |
| EmS Codes: | |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | Not relevant |
| Segregation group: | Not relevant |
| 14.7 Maritime transport in bulk according to IMO instruments: | Not relevant |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2024:

DOT 4

Date of compilation: 02/04/2024 Version: 1

SECTION 14: TRANSPORT INFORMATION (continued)

14.1 UN number or ID number:	Not relevant
14.2 UN proper shipping name:	Not relevant
14.3 Transport hazard class(es):	Not relevant
Labels:	Not relevant
14.4 Packing group:	Not relevant
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:	Not relevant

SECTION 15: REGULATORY INFORMATION

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

- Article 95, REGULATION (EU) No 528/2012: Not relevant
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

Seveso III:

Not relevant

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.

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.

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:

Chemicals (Amendment) Act 2010 (No. 32 of 2010) as amended by S.I. No. 623/2015- Safety, Health and Welfare at Work (Chemical Agents) (Amendment) Regulations 2015
Chemicals Act 2008 (No. 13 of 2008)
Safety, Health and Welfare (chemical agents) (amendment) regulations 2021 (S.I. No. 232 of 2021) and associated Code of Practice
Chemical Agents Regulations (S.I. No. 619 of 2001)
European Communities (Waste Directive) Regulations, S.I. No. 126 of 2011
S.I. No. 315/2016 - European Union (Waste Directive) (Amendment) Regulations 2016.
S.I. No. 323/2020 - European Union (Waste Directive) Regulations 2020
Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015)
The Chemicals Act (CLP Regulation) Regulations 2011 (S.I. No. 102 of 2011)

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 (COMMISSION REGULATION (EU) 2020/878)

DOT 4

Date of compilation: 02/04/2024 Version: 1

SECTION 16: OTHER INFORMATION (continued)

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

Not relevant

Texts of the legislative phrases mentioned in section 2:

H361d: Suspected of damaging the unborn child.

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 Irrit. 2: H319 - Causes serious eye irritation.

Repr. 2: H361d - Suspected of damaging the unborn child.

Classification procedure:

Repr. 2: Calculation method

Acute Tox. 4: 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.

- END OF SAFETY DATA SHEET -