XTREME Brake fluid dot 4 - Brake fluid

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

1.1 Product identifier: XTREME Brake fluid dot 4 - Brake fluid

Other means of identification:

Non-applicable

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

Relevant uses: Brake fluid. 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:

AXXONOIL SRL
CIRC. CLODIA 36/B
00195 ROME - LAZIO - ITALY
Phone: +390824947522
info@axxonoil.com
www.axxonoil.com

1.4 Emergency telephone number: Attive 24 hours a day:

+39-06-68593626-CAV "Osp.Pediatrico Bambino Gesù" Dip. Emergenza e Accettazione DEA-Rome
800-183-459-CAV Azienda Ospedaliera Università di Foggia-Foggia
+39-081-545-3333/081-747-2870-Centro Antiveleni AORN Antonio Cardarelli-Naples
+39-06-4997-8000-CAV Policlinico "Umberto I"-Rome
+39-06-305-4343-CAV Policlinico "A.Gemelli"- Rome
+39-055-794-7819-CAV Azienda Osp. "Caregg" U.O. Tossicologia Medica-Florence
+39-0382-24-444 -CAV Centro Nazionale di Informazione Tossicologica-Pavia
+39-02-66-1010-29-CAV Ospedale Niguarda Ca'Granda-Milan
800-88-33-00-CAV Azienda Ospedaliera Papa Giovanni XXIII-Bergamo
800-011-858-CAV Centro Antiveleni Veneto-Verona

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
STOT RE 2: Specific target organ toxicity — Repeated exposure, Hazard Category 2, H373

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Warning

Hazard statements:

Acute Tox. 4: H302 - Harmful if swallowed.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P501: Dispose of contents/ container in accordance with local/regional/national/international regulation.

Supplementary information:

EUH208: Contains {0}. May produce an allergic reaction.

UFI: S24Y-4RWT-YT1K-1NVQ

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria
Endocrine-disrupting properties: The product fails to meet the criteria.

*** Changes with regards to the previous version*

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS **

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Glycol/s

Components:

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

Identification	Chemical name/Classification		Concentration
CAS: 111-46-6 EC: 203-872-2 Index: 603-140-00-6 REACH: 01-2119457857-21-XXXX	**2,2´ -oxybisethanol(1)**	Self-classified	**70 - <100 %**
	Regulation 1272/2008	Acute Tox. 4: H302; STOT RE 2: H373 - Warning	
CAS: 107-21-1 EC: 203-473-3 Index: 603-027-00-1 REACH: 01-2119456816-28-XXXX	**Ethanediol(1)**	Self-classified	**1,2 - <10 %**
	Regulation 1272/2008	Acute Tox. 4: H302; STOT RE 2: H373 - Warning	
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)**	Self-classified	**<1 %**
	Regulation 1272/2008	Repr. 2: H361d - Warning	
CAS: 111-77-3 EC: 203-906-6 Index: 603-107-00-6 REACH: 01-2119475100-52-XXXX	**2-(2-methoxyethoxy)ethanol(2)**	ATP CLP00	**<1 %**
	Regulation 1272/2008	Repr. 2: H361d - Warning	
CAS: 141-43-5 EC: 205-483-3 Index: 603-030-00-8 REACH: 01-2119486455-28-XXXX	**2-aminoethanol(2)**	Self-classified	**<1 %**
	Regulation 1272/2008	Acute Tox. 4: H302+H312+H332; Aquatic Chronic 3: H412; Skin Corr. 1B: H314; STOT SE 3: H335 - Danger	

(1) Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878
(2) Substance with a Union workplace exposure limit

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

Other information:

Identification	Specific concentration limit
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	% (w/w) >=5: STOT SE 3 - H335

*** Changes with regards to the previous version*

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:

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 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:

- CONTINUED ON NEXT PAGE -

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 spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders:

See section 8.

6.2 Environmental precautions:

Avoid spillage into the aquatic environment as it contains substances potentially dangerous for this. Contain the product absorbed in hermetically sealed containers. In the case of serious spillage into the aquatic environment notify the relevant authority.

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 destroy 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 ºC

Maximum Temp.: 30 ºC

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 (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC,Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
Ethanediol	IOELV (8h)	20 ppm	52 mg/m³
CAS: 107-21-1 EC: 203-473-3	IOELV (STEL)	40 ppm	104 mg/m³
2-(2-methoxyethoxy)ethanol	IOELV (8h)	10 ppm	50,1 mg/m³
CAS: 111-77-3 EC: 203-906-6	IOELV (STEL)		
2-aminoethanol	IOELV (8h)	1 ppm	2,5 mg/m³
CAS: 141-43-5 EC: 205-483-3	IOELV (STEL)	3 ppm	7,6 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2,2´ -oxybisethanol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 111-46-6	Dermal	Non-applicable	Non-applicable	43 mg/kg	Non-applicable
EC: 203-872-2	Inhalation	Non-applicable	Non-applicable	44 mg/m³	60 mg/m³
Ethanediol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 107-21-1	Dermal	Non-applicable	Non-applicable	106 mg/kg	Non-applicable
EC: 203-473-3	Inhalation	Non-applicable	Non-applicable	Non-applicable	35 mg/m³
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 30989-05-0	Dermal	Non-applicable	Non-applicable	8,3 mg/kg	Non-applicable
EC: 250-418-4	Inhalation	Non-applicable	Non-applicable	29,1 mg/m³	Non-applicable
2-(2-methoxyethoxy)ethanol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 111-77-3	Dermal	Non-applicable	Non-applicable	2,22 mg/kg	Non-applicable
EC: 203-906-6	Inhalation	Non-applicable	Non-applicable	50,1 mg/m³	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-aminoethanol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 141-43-5	Dermal	Non-applicable	Non-applicable	3 mg/kg	Non-applicable
EC: 205-483-3	Inhalation	Non-applicable	Non-applicable	1 mg/m³	0,51 mg/m³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2,2´-oxybisethanol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 111-46-6	Dermal	Non-applicable	Non-applicable	21 mg/kg	Non-applicable
EC: 203-872-2	Inhalation	Non-applicable	Non-applicable	12 mg/m³	12 mg/m³
Ethanediol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 107-21-1	Dermal	Non-applicable	Non-applicable	53 mg/kg	Non-applicable
EC: 203-473-3	Inhalation	Non-applicable	Non-applicable	Non-applicable	7 mg/m³
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	Oral	Non-applicable	Non-applicable	4,1 mg/kg	Non-applicable
CAS: 30989-05-0	Dermal	Non-applicable	Non-applicable	4,1 mg/kg	Non-applicable
EC: 250-418-4	Inhalation	Non-applicable	Non-applicable	7,2 mg/m³	Non-applicable
2-(2-methoxyethoxy)ethanol	Oral	Non-applicable	Non-applicable	7,5 mg/kg	Non-applicable
CAS: 111-77-3	Dermal	Non-applicable	Non-applicable	1,33 mg/kg	Non-applicable
EC: 203-906-6	Inhalation	Non-applicable	Non-applicable	30,1 mg/m³	Non-applicable
2-aminoethanol	Oral	Non-applicable	Non-applicable	1,5 mg/kg	Non-applicable
CAS: 141-43-5	Dermal	Non-applicable	Non-applicable	1,5 mg/kg	Non-applicable
EC: 205-483-3	Inhalation	Non-applicable	Non-applicable	0,18 mg/m³	0,28 mg/m³

PNEC:

Identification				
2,2´-oxybisethanol	STP	199,5 mg/L	Fresh water	10 mg/L
CAS: 111-46-6	Soil	1,53 mg/kg	Marine water	1 mg/L
EC: 203-872-2	Intermittent	10 mg/L	Sediment (Fresh water)	20,9 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	2,09 mg/kg
Ethanediol	STP	199,5 mg/L	Fresh water	10 mg/L
CAS: 107-21-1	Soil	1,53 mg/kg	Marine water	1 mg/L
EC: 203-473-3	Intermittent	10 mg/L	Sediment (Fresh water)	37 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	3,7 mg/kg
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	STP	100 mg/L	Fresh water	0,211 mg/L
CAS: 30989-05-0	Soil	0,028 mg/kg	Marine water	0,021 mg/L
EC: 250-418-4	Intermittent	2,112 mg/L	Sediment (Fresh water)	0,76 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,076 mg/kg
2-(2-methoxyethoxy)ethanol	STP	10000 mg/L	Fresh water	12 mg/L
CAS: 111-77-3	Soil	2,1 mg/kg	Marine water	1,2 mg/L
EC: 203-906-6	Intermittent	12 mg/L	Sediment (Fresh water)	44,4 mg/kg
	Oral	0,09 g/kg	Sediment (Marine water)	0,44 mg/kg
2-aminoethanol	STP	100 mg/L	Fresh water	0,07 mg/L
CAS: 141-43-5	Soil	1,29 mg/kg	Marine water	0,007 mg/L
EC: 205-483-3	Intermittent	0,028 mg/L	Sediment (Fresh water)	0,357 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,036 mg/kg

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.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	CE CAT III	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	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)	CE CAT III	EN 420:2004+A1:2010	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	Face shield	CE 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

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks	CE CAT III	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	CE CAT III	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):	0,05 % weight
V.O.C. density at 20 ºC:	0,56 kg/m³ (0,56 g/L)
Average carbon number:	3,8
Average molecular weight:	96,66 g/mol

*** Changes with regards to the previous version*

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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 ºC:	Liquid
Appearance:	Transparent
Colour:	Yellowish
Odour:	Odourless
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	≥230 ºC (ASTM D 1120-72)
Vapour pressure at 20 ºC:	Non-applicable *
Vapour pressure at 50 ºC:	Non-applicable *
Evaporation rate at 20 ºC:	Non-applicable *

Product description:

Density at 20 ºC:	1116,4 kg/m³
Relative density at 20 ºC:	1,12
Dynamic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 40 ºC:	Non-applicable *
Concentration:	Non-applicable *
pH:	7 - 11,5
Vapour density at 20 ºC:	Non-applicable *
Partition coefficient n-octanol/water 20 ºC:	Non-applicable *
Solubility in water at 20 ºC:	Non-applicable *
Solubility properties:	Water miscible
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

Flammability:

Flash Point:	>93 ºC
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 classes:

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 ºC:	Non-applicable *

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

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES ** (continued)

Refraction index: Non-applicable *

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

*** Changes with regards to the previous version*

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:

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

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. However, it does 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. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: 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.

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

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains 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):

*** Changes with regards to the previous version*

- CONTINUED ON NEXT PAGE -

SECTION 11: TOXICOLOGICAL INFORMATION ** (continued)

- 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. 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: Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- 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
2,2´-oxybisethanol	LD50 oral	500 mg/kg	Rat
CAS: 111-46-6	LD50 dermal	11890 mg/kg	Rabbit
EC: 203-872-2	LC50 inhalation	Non-applicable	
Ethanediol	LD50 oral	500 mg/kg (ATEi)	
CAS: 107-21-1	LD50 dermal	Non-applicable	
EC: 203-473-3	LC50 inhalation	Non-applicable	
2-(2-methoxyethoxy)ethanol	LD50 oral	7128 mg/kg	Rat
CAS: 111-77-3	LD50 dermal	9404 mg/kg	Rabbit
EC: 203-906-6	LC50 inhalation	Non-applicable	
2-aminoethanol	LD50 oral	500 mg/kg	Rat
CAS: 141-43-5	LD50 dermal	1025 mg/kg	Rabbit
EC: 205-483-3	LC50 inhalation	11 mg/L (4 h)	Rat

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine disrupting properties: The product fails to meet the criteria.

*** Changes with regards to the previous version*

Other information

Non-applicable

*** Changes with regards to the previous version*

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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
2,2´-oxybisethanol	LC50	32000 mg/L (96 h)	Gambussia afinis	Fish
CAS: 111-46-6	EC50	84000 mg/L (48 h)	Daphnia magna	Crustacean
EC: 203-872-2	EC50	Non-applicable		
Ethanediol	LC50	53000 mg/L (96 h)	Pimephales promelas	Fish
CAS: 107-21-1	EC50	51000 mg/L (48 h)	Daphnia magna	Crustacean
EC: 203-473-3	EC50	24000 mg/L (168 h)	Selenastrum capricornutum	Algae
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	LC50	222 mg/L (96 h)	Oncorhynchus mykiss	Fish
CAS: 30989-05-0	EC50	211 mg/L (48 h)	Daphnia magna	Crustacean
EC: 250-418-4	EC50	Non-applicable		
2-(2-methoxyethoxy)ethanol	LC50	5741 mg/L (96 h)	Pimephales promelas	Fish
CAS: 111-77-3	EC50	1192 mg/L (48 h)	Daphnia magna	Crustacean
EC: 203-906-6	EC50	Non-applicable		
2-aminoethanol	LC50	349 mg/L (96 h)	Cyprinus carpio	Fish
CAS: 141-43-5	EC50	65 mg/L (48 h)	Daphnia magna	Crustacean
EC: 205-483-3	EC50	22 mg/L (72 h)	Scenedesmus subspicatus	Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
2,2´-oxybisethanol	NOEC	Non-applicable		
CAS: 111-46-6 EC: 203-872-2	NOEC	8590 mg/L	Ceriodaphnia dubia	Crustacean
2-aminoethanol	NOEC	1,24 mg/L	Oryzias latipes	Fish
CAS: 141-43-5 EC: 205-483-3	NOEC	0,85 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
2,2´-oxybisethanol	BOD5	0,05 g O2/g	Concentration	100 mg/L
CAS: 111-46-6	COD	1,51 g O2/g	Period	28 days
EC: 203-872-2	BOD5/COD	0,03	% Biodegradable	90 %
Ethanediol	BOD5	0,47 g O2/g	Concentration	100 mg/L
CAS: 107-21-1	COD	1,29 g O2/g	Period	14 days
EC: 203-473-3	BOD5/COD	0,36	% Biodegradable	90 %

*** Changes with regards to the previous version*

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SECTION 12: ECOLOGICAL INFORMATION ** (continued)

Identification	Degradability		Biodegradability	
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	BOD5	Non-applicable	Concentration	39 mg/L
CAS: 30989-05-0	COD	Non-applicable	Period	10 days
EC: 250-418-4	BOD5/COD	Non-applicable	% Biodegradable	70 %
2-(2-methoxyethoxy)ethanol	BOD5	Non-applicable	Concentration	Non-applicable
CAS: 111-77-3	COD	Non-applicable	Period	28 days
EC: 203-906-6	BOD5/COD	Non-applicable	% Biodegradable	100 %
2-aminoethanol	BOD5	Non-applicable	Concentration	20 mg/L
CAS: 141-43-5	COD	Non-applicable	Period	21 days
EC: 205-483-3	BOD5/COD	Non-applicable	% Biodegradable	90 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
2,2´-oxybisethanol	BCF	0
CAS: 111-46-6	Pow Log	-1.47
EC: 203-872-2	Potential	Low
Ethanediol	BCF	10
CAS: 107-21-1	Pow Log	-1.36
EC: 203-473-3	Potential	Low
2-(2-methoxyethoxy)ethanol	BCF	3
CAS: 111-77-3	Pow Log	-1.18
EC: 203-906-6	Potential	Low
2-aminoethanol	BCF	3
CAS: 141-43-5	Pow Log	-1.31
EC: 205-483-3	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
2,2´-oxybisethanol	Koc	1	Henry	2,06E-4 Pa·m³/mol
CAS: 111-46-6	Conclusion	Very High	Dry soil	No
EC: 203-872-2	Surface tension	4,954E-2 N/m (25 ºC)	Moist soil	No
Ethanediol	Koc	0	Henry	1,327E-1 Pa·m³/mol
CAS: 107-21-1	Conclusion	Very High	Dry soil	No
EC: 203-473-3	Surface tension	4,989E-2 N/m (25 ºC)	Moist soil	No
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	Koc	0.01	Henry	Non-applicable
CAS: 30989-05-0	Conclusion	Very High	Dry soil	Non-applicable
EC: 250-418-4	Surface tension	Non-applicable	Moist soil	Non-applicable

*** Changes with regards to the previous version*

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SECTION 12: ECOLOGICAL INFORMATION ** (continued)

Identification	Absorption/desorption		Volatility	
2-(2-methoxyethoxy)ethanol	Koc	1	Henry	1,621E-6 Pa·m³/mol
CAS: 111-77-3	Conclusion	Very High	Dry soil	Non-applicable
EC: 203-906-6	Surface tension	3,59E-2 N/m (25 ºC)	Moist soil	No
2-aminoethanol	Koc	0.27	Henry	3,7E-5 Pa·m³/mol
CAS: 141-43-5	Conclusion	Very High	Dry soil	No
EC: 205-483-3	Surface tension	5,025E-2 N/m (25 ºC)	Moist soil	No

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product fails to meet the criteria.

12.7 Other adverse effects:

Not described

*** Changes with regards to the previous version*

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
16 01 13*	brake fluids	Dangerous

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

HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, 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

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SECTION 14: TRANSPORT INFORMATION (continued)

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

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 ....):

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.:

COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3, SECTION 11, SECTION 12):

· New declared substances
  2,2´-oxybisethanol (111-46-6)
  Ethanediol (107-21-1)
  Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)
  2-(2-methoxyethoxy)ethanol (111-77-3)
  2-aminoethanol (141-43-5)
· Removed substances
  3,6,9,12-tetraoxatetradecane-1,14-diol (4792-15-8)

CLP Regulation (EC) No 1272/2008 (SECTION 2, SECTION 16):

· Pictograms
· Hazard statements
· Supplementary information

Information on basic physical and chemical properties (SECTION 9):

· Flash Point

Texts of the legislative phrases mentioned in section 2:

H373: May cause damage to organs through prolonged or repeated exposure.
H302: Harmful if swallowed.

Texts of the legislative phrases mentioned in section 3:

*** Changes with regards to the previous version*

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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

CLP Regulation (EC) No 1272/2008:

Acute Tox. 4: H302 - Harmful if swallowed.
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.
Repr. 2: H361d - Suspected of damaging the unborn child.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral).
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.
STOT SE 3: H335 - May cause respiratory irritation.

Classification procedure:

STOT RE 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

*** Changes with regards to the previous version*

- END OF SAFETY DATA SHEET -