



according to Regulation (EC) No 1907/2006

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**SECTION 3: Composition/information on ingredients**
**3.2. Mixtures**
**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
30989-05-0	Tris [2- [2- (2-methoxyethoxy) ethoxy] ethyl] orthoborate			>30- <50 %
	250-418-4		01-2119462824-33	
	Repr. 2; H361d			
	Reaction mass of 2- (2- (2-butoxyethoxy) ethoxy) ethanol and 3,6,9,12-tetraoxahexadecan-1-ol			>10 - <14 %
	907-996-4		01-2119531322-53	
	Eye Dam. 1; H318			
111-46-6	Diethylene glycol			>1 - <10 %
	203-872-2		01-2119457857-21	
	Acute Tox. 4; H302			
110-97-4	1,1'-iminodipropyl-2-ol, di-isopropanolamine			>1 - <3 %
	203-820-9	603-083-00-7	01-2119475444-34	
	Eye Irrit. 2; H319			

Full text of H and EUH statements: see section 16.

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**General information**

Self-protection of the first aider

Change contaminated clothing.

Do not put any product-impregnated cleaning rags into your trouser pockets.

**After inhalation**

Provide fresh air. Medical treatment necessary. In case of inhalation of aerosols/spray mist/splash spots:

Consult physician.

Avoid breathing dust/fume/gas/mist/vapours/spray. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

**After contact with skin**

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.

If skin irritation or rash occurs: Get medical advice/attention.

**After contact with eyes**

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.

Consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Medical treatment necessary. Call a physician immediately.

**4.2. Most important symptoms and effects, both acute and delayed**

No known symptoms to date.

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**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically. Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**Co-ordinate fire-fighting measures to the fire surroundings. Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam. Water spray.**5.2. Special hazards arising from the substance or mixture**Non-flammable. Special exposure hazards arising from the substance itself, combustion products, resulting gases:  
CO, NO<sub>x</sub>**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.  
Wear suitable protective clothing.**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

**6.3. Methods and material for containment and cleaning up**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. No special handling instructions are necessary.

**Advice on protection against fire and explosion**

Keep away from combustible material.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep container tightly closed and dry.

**Hints on joint storage**

No special measures are necessary.

**7.3. Specific end use(s)**

Hydraulic fluids

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
111-46-6	2,2'-Oxydiethanol	23	101		TWA (8 h)	WEL

### 8.2. Exposure controls



#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

#### Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Avoid contact with skin and eyes.

#### Eye/face protection

Wear eye protection/face protection. Wear eye/face protection.

#### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

NBR (Nitrile rubber); 0,4mm; 30min

Butyl rubber.; 0,7mm; 480min

#### Skin protection

Wear suitable protective clothing.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. full mask (DIN EN 136).

Further regulations, limitations and legal requirements:

National regulations, Regulatory information, EU legislation

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	yellow
Odour:	characteristic

pH-Value (at 20 °C):

**Test method**  
~8,5 FMVSS 116

#### Changes in the physical state

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Melting point:	not determined
Initial boiling point and boiling range:	>260 °C FMVSS 116
Pour point:	< -70 °C
:	DIN 51583
Flash point:	>139 °C DIN EN ISO 2719

**Flammability**

Solid:	not applicable
Gas:	not applicable

Lower explosion limits:	1,5 vol. %
Upper explosion limits:	not determined
Ignition temperature:	DIN 51794

**Auto-ignition temperature**

Solid:	not applicable
Gas:	>200 °C

Decomposition temperature:	360 °C DSC
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**Oxidizing properties**

Not oxidising.

Vapour pressure: (at 20 °C)	<1 hPa
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Density (at 20 °C):	~ 1,06 g/cm <sup>3</sup> DIN 51757
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Water solubility: (at 20 °C)	completely miscible
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**Solubility in other solvents**

not determined

Partition coefficient:	not applicable
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Viscosity / kinematic: (at 20 °C)	~ 15-17 mm <sup>2</sup> /s FMVSS 116
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Vapour density:	not determined
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Evaporation rate:	not determined
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**9.2. Other information**

Solid content:	not determined
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The product is hygroscopic.

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

This product is stable under normal conditions. Hazardous reactions are unlikely.

**10.2. Chemical stability**

Onset of decomposition at elevated temperatures (~360°C)

**10.3. Possibility of hazardous reactions**

This product is stable under normal conditions. Hazardous reactions are unlikely.

**10.4. Conditions to avoid**

not determined

**10.5. Incompatible materials**

not determined

according to Regulation (EC) No 1907/2006

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**10.6. Hazardous decomposition products**

No special measures required when used in accordance with the instructions.

**SECTION 11: Toxicological information**
**11.1. Information on toxicological effects**
**Acute toxicity**

not determined

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
111-46-6	Diethylene glycol					
	oral	ATE 500 mg/kg				
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine					
	oral	LD50 4765 mg/kg	Rat			

**Irritation and corrosivity**

not determined

**Sensitising effects**

not determined

**Carcinogenic/mutagenic/toxic effects for reproduction**

not determined

**Additional information on tests**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

**SECTION 12: Ecological information**
**12.1. Toxicity**

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine					
	Acute fish toxicity	LC50 > 1000-2200 mg/l	96 h	Leuciscus idus		

**12.2. Persistence and degradability**

Product is biodegradable. (90% / 15d)

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine	-0,82

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

The product has not been tested.

**12.6. Other adverse effects**

No information available.

according to Regulation (EC) No 1907/2006

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**Further information**

Avoid release to the environment.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Send to a hazardous waste incinerator facility under observation of official regulations.

**List of Wastes Code - residues/unused products**

160113 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); brake fluids; hazardous waste

**List of Wastes Code - used product**

160113 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); brake fluids; hazardous waste

**Contaminated packaging**

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.
- 14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Inland waterways transport (ADN)**

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.
- 14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Marine transport (IMDG)**

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.
- 14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Air transport (ICAO-TI/IATA-DGR)**

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.
- 14.4. Packing group:** No dangerous good in sense of this transport regulation.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

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**14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

No dangerous good in sense of this transport regulation.

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

**Additional information**

Inventories for chemical substances  
Switzerland: yes

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 3.

**Abbreviations and acronyms**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service
- LC50: Lethal concentration, 50%
- LD50: Lethal dose, 50%

**Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**

Classification	Classification procedure
Repr. 2; H361d	Calculation method

**Relevant H and EUH statements (number and full text)**

- H302 Harmful if swallowed.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H361d Suspected of damaging the unborn child.

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.



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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*