

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**brake fluid DOT 4**  
**Article number: 99 90 0001, 30 92 6461, 10 92 1754**  
**UFI: J944-AH4A-H001-PDNP**

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

#### 1.2.1 Relevant uses

brake fluid

#### 1.2.2 Uses advised against

None known.

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

**Company** SWAG Autoteile GmbH  
Am Kiesberg 4-6  
42117 Wuppertal / GERMANY  
Phone +49 (0)202 26454-0  
Fax +49 (0)202 26454-5000  
Homepage [www.swag.de](http://www.swag.de)  
E-mail [info@swag.de](mailto:info@swag.de)

#### Address enquiries to

**Technical information** [info@swag.de](mailto:info@swag.de)

**Safety Data Sheet** [info@swag.de](mailto:info@swag.de)

### 1.4 Emergency telephone number

**Advisory body** +49 (0)89-19240 (24h) (English)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

Eye Irrit. 2: H319 Causes serious eye irritation.  
Repr. 2: H361d Suspected of damaging the unborn child.

### 2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

#### Hazard pictograms



**Signal word** WARNING

**Contains:** Tris[2-(2-(2-methoxyethoxy)ethoxy)ethyl]orthoborate

**Hazard statements** H319 Causes serious eye irritation.  
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.  
P202 Do not handle until all safety precautions have been read and understood.  
P280 Wear protective gloves / protective clothing / eye protection / face protection.  
P308+P313 IF exposed or concerned: Get medical advice / attention.  
P337+P313 If eye irritation persists: Get medical advice / attention.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/national regulation.

### 2.3 Other hazards

Physico-chemical hazards	Material will burn in fire.
Environmental hazards	Does not contain any PBT or vPvB substances.
Other hazards	none

## SECTION 3: Composition / Information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

The product is a mixture.

Range [%]	Substance
20 - 30	Tris[2-(2-(2-methoxyethoxy)ethoxy)ethyl]orthoborate CAS: 30989-05-0, EINECS/ELINCS: 250-418-4 GHS/CLP: Repr. 2: H361d
20 - 29.9	2-(2-(2-Butoxyethoxy)ethoxy)ethanol CAS: 143-22-6, EINECS/ELINCS: 205-592-6, EU-INDEX: 603-183-00-0, Reg-No.: 01-2119531322-53-XXXX GHS/CLP: Eye Dam. 1: H318 SCL [%]: >=30: Eye Dam. 1: H318, 20 - <30: Eye Irrit. 2: H319
5 - 10	Poly(oxy-1,2-ethanediyl), $\alpha$ -butyl- $\omega$ -hydroxy CAS: 9004-77-7, EINECS/ELINCS: 500-012-0, Reg-No.: 01-2119475115-41-XXXX GHS/CLP: Eye Dam. 1: H318 SCL [%]: >= 30: Eye Dam. 1: H318, 20 - <30: Eye Irrit. 2: H319
0 - 9.9	2-2'-oxybisethanol CAS: 111-46-6, EINECS/ELINCS: 203-872-2, EU-INDEX: 603-140-00-6, Reg-No.: 01-2119457857-21-XXXX GHS/CLP: Acute Tox. 4: H302
0 - 2.99	2-(2-Butoxyethoxy)ethanol CAS: 112-34-5, EINECS/ELINCS: 203-961-6, EU-INDEX: 603-096-00-8, Reg-No.: 01-2119475104-44-XXXX GHS/CLP: Eye Irrit. 2: H319
0 - 2.99	2-(2-Methoxyethoxy)ethanol CAS: 111-77-3, EINECS/ELINCS: 203-906-6, EU-INDEX: 603-107-00-6, Reg-No.: 01-2119475100-52-XXXX GHS/CLP: Repr. 2: H361d

**Comment on component parts** Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.  
 For full text of H-statements and R-phrases: see SECTION 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>General information</b>	Take off contaminated clothing and wash before reuse.
<b>Inhalation</b>	Ensure supply of fresh air. In the event of symptoms seek medical treatment.
<b>Skin contact</b>	When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Consult a doctor immediately. Do not induce vomiting. Rinse out mouth and give plenty of water to drink.

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

No information available.

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

Treat symptomatically.  
Forward this sheet to your doctor.

### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media	Foam, dry powder, water spray jet, carbon dioxide
Extinguishing media that must not be used	Full water jet

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

Not combusted hydrocarbons.  
Risk of formation of toxic pyrolysis products.  
Carbon monoxide (CO)  
Nitrogen oxides (NOx).

#### 5.3 Advice for firefighters

Use self-contained breathing apparatus.  
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.  
Collect contaminated firefighting water separately, must not be discharged into the drains.

### SECTION 6: Accidental release measures

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

Ensure adequate ventilation.  
High risk of slipping due to leakage/spillage of product.  
Forms slippery surfaces with water.

#### 6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).  
Do not discharge into the drains/surface waters/groundwater.

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

Take up with absorbent material (e.g. general-purpose binder).  
Dispose of absorbed material in accordance with the regulations.

#### 6.4 Reference to other sections

See SECTION 8+13

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Use only in well-ventilated areas.  
The product is combustible.  
Do not eat, drink or smoke when using this product.  
Use barrier skin cream.  
Wash hands before breaks and after work.  
Contaminated work clothing should not be allowed out of the workplace.  
Take off contaminated clothing and wash before reuse.

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

Keep only in original container.  
Prevent penetration into the ground.  
  
Do not store together with oxidizing agents.  
  
Keep container tightly closed.  
Keep container in a well-ventilated place.  
Protect from heat/overheating.  
Keep in a cool place. Store in a dry place.  
Recommended storage temperature: 18 - 23°C

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

See product use, SECTION 1.2

## SECTION 8: Exposure controls / personal protection

### 8.1 Control parameters

#### Ingredients with occupational exposure limits to be monitored (GB)

Substance
2-2'-oxybisethanol
CAS: 111-46-6, EINECS/ELINCS: 203-872-2, EU-INDEX: 603-140-00-6, Reg-No.: 01-2119457857-21-XXXX
Long-term exposure: 23 ppm, 101 mg/m <sup>3</sup>
2-(2-Methoxyethoxy)ethanol
CAS: 111-77-3, EINECS/ELINCS: 203-906-6, EU-INDEX: 603-107-00-6, Reg-No.: 01-2119475100-52-XXXX
Long-term exposure: 10 ppm, 50,1 mg/m <sup>3</sup> , Sk
2-(2-Butoxyethoxy)ethanol
CAS: 112-34-5, EINECS/ELINCS: 203-961-6, EU-INDEX: 603-096-00-8, Reg-No.: 01-2119475104-44-XXXX
Long-term exposure: 10 ppm, 67,5 mg/m <sup>3</sup>
Short-term exposure (15-minute): 15 ppm, 101,2 mg/m <sup>3</sup>

#### Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
2-(2-Methoxyethoxy)ethanol
CAS: 111-77-3, EINECS/ELINCS: 203-906-6, EU-INDEX: 603-107-00-6, Reg-No.: 01-2119475100-52-XXXX
Eight hours: 10 ppm, 50,1 mg/m <sup>3</sup> , H
2-(2-Butoxyethoxy)ethanol
CAS: 112-34-5, EINECS/ELINCS: 203-961-6, EU-INDEX: 603-096-00-8, Reg-No.: 01-2119475104-44-XXXX
Eight hours: 10 ppm, 67,5 mg/m <sup>3</sup>
Short-term (15-minute): 15 ppm, 101,2 mg/m <sup>3</sup>

#### DNEL

Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
Industrial, inhalative, Long-term - local effects, 67.5 mg/m <sup>3</sup>
Industrial, inhalative, Acute - local effects, 101.2 mg/m <sup>3</sup>
general population, oral, Long-term - systemic effects, 6.25 mg/kg bw/day
2-2'-oxybisethanol, CAS: 111-46-6
Industrial, inhalative, Acute - local effects, 60 mg/m <sup>3</sup>
Industrial, dermal, Long-term - systemic effects, 43 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 44 mg/m <sup>3</sup>
general population, dermal, Long-term - systemic effects, 21 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 12 mg/m <sup>3</sup>
general population, inhalative, Acute - local effects, 12 mg/m <sup>3</sup>
2-(2-(2-Butoxyethoxy)ethoxy)ethanol, CAS: 143-22-6
Industrial, dermal, Acute - local effects, 8.35 mg/cm <sup>2</sup>
Industrial, dermal, Long-term - local effects, 5.65 mg/cm <sup>2</sup>
Industrial, dermal, Acute - systemic effects, 400 mg/kg bw/day
Industrial, dermal, Long-term - systemic effects, 208 mg/kg bw/day
Industrial, inhalative, Acute - local effects, 96 mg/m <sup>3</sup>
Industrial, inhalative, Long-term - local effects, 30.5 mg/m <sup>3</sup>
Industrial, inhalative, Acute - systemic effects, 96 mg/m <sup>3</sup>



Industrial, inhalative, Long-term - systemic effects, 24 mg/m <sup>3</sup>
general population, dermal, Long-term - systemic effects, 125 mg/kg bw/day
general population, dermal, Long-term - local effects, 2.823 mg/cm <sup>2</sup>
general population, dermal, Acute - systemic effects, 200 mg/kg bw/day
general population, dermal, Acute - local effects, 4.173 mg/cm <sup>2</sup>
general population, inhalative, Long-term - systemic effects, 12 mg/m <sup>3</sup>
general population, inhalative, Acute - local effects, 48 mg/m <sup>3</sup>
general population, inhalative, Long-term - local effects, 15.252 mg/m <sup>3</sup>
general population, inhalative, Acute - systemic effects, 48 mg/m <sup>3</sup>
general population, oral, Acute - systemic effects, 103.4 mg/kg bw/day
general population, oral, Long-term - systemic effects, 12.5 mg/kg bw/day
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
Industrial, dermal, Long-term - systemic effects, 2.22 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 50.1 mg/m <sup>3</sup>
general population, oral, Long-term - systemic effects, 7.5 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 1.33 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 30.1 mg/m <sup>3</sup>
Poly(oxy-1,2-ethanediyl), α-butyl-ω-hydroxy, CAS: 9004-77-7
Industrial, dermal, Long-term - systemic effects, 208 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 195 mg/m <sup>3</sup>
general population, oral, Long-term - systemic effects, 12.5 mg/kg bw/day
general population, dermal, Long-term - systemic effects, 125 mg/kg bw/day
general population, inhalative, Long-term - systemic effects, 117 mg/m <sup>3</sup>

## PNEC

Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
soil, 320 µg/kg soil dw
oral (food), 56 mg/kg food
sediment (seawater), 440 µg/kg sediment dw
sediment (freshwater), 4.4 mg/kg sediment dw
seawater, 110 µg/L
freshwater, 1.1 mg/L
2-2'-oxybisethanol, CAS: 111-46-6
sediment (freshwater), 20.9 mg/kg
soil, 1.53 mg/kg
seawater, 1 mg/L
freshwater, 10 mg/L
sewage treatment plants (STP), 199.5 mg/L
2-(2-(2-Butoxyethoxy)ethoxy)ethanol, CAS: 143-22-6
freshwater, 2 - 100 mg/L
seawater, 200 - 142570 µg/L
soil, 470 - 11510 µg/kg soil dw
sewage treatment plants (STP), 199.5 - 200 mg/L
sediment (freshwater), 7.7 - 11.115 mg/kg sediment dw
sediment (seawater), 770 - 1111.5 µg/kg sediment dw
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
terrestrial, 2.1 mg/kg
freshwater, 12 mg/L

seawater, 1.2 mg/L
sewage treatment plants (STP), 10000 mg/L
sediment (seawater), 0.44 mg/kg sediment dw
oral (food), 0.09 g/kg
sediment (freshwater), 44.4 mg/kg sediment dw
Poly(oxy-1,2-ethanediyl), $\alpha$ -butyl- $\omega$ -hydroxy, CAS: 9004-77-7
freshwater, 4.5 mg/L
seawater, 310 $\mu$ g/L
sewage treatment plants (STP), 500 mg/L
sediment (freshwater), 6.6 mg/kg sediment dw
sediment (seawater), 660 $\mu$ g/kg sediment dw
soil, 1.02 - 1.32 mg/kg soil dw
oral (food), 111 - 333 mg/kg food

## 8.2 Exposure controls

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
<b>Eye protection</b>	safety glasses
<b>Hand protection</b>	The details concerned are recommendations. Please contact the glove supplier for further information. > 0.4 mm; Nitrile rubber, >480 min (EN 374-1/-2/-3).
<b>Skin protection</b>	Oil-resistant protective clothing.
<b>Other</b>	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier. Avoid contact with eyes and skin. Do not inhale vapours.
<b>Respiratory protection</b>	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, filter A. (DIN EN 14387)
<b>Thermal hazards</b>	none
<b>Delimitation and monitoring of the environmental exposition</b>	Comply with applicable environmental regulations limiting discharge to air, water and soil.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Color	amber colour
Odor	mild
Odour threshold	not applicable
pH-value	7 - 11.5
pH-value [1%]	No information available.
Boiling point [°C]	> 260
Flash point [°C]	> 100
Flammability (solid, gas) [°C]	> 280
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	1 mbar
Density [g/cm <sup>3</sup> ]	1.02 - 1.07 (20 °C / 68,0 °F)
Relative density	not determined
Bulk density [kg/m <sup>3</sup> ]	not applicable
Solubility in water	miscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	1.5
Kinematic viscosity	ca. 15 - 10 cSt max. 1500 cSt (-40°C) min. 1.5 cST (100°C)
Relative vapour density	No information available.
Evaporation speed	0.01
Melting point [°C]	-50
Auto-ignition temperature	No information available.
Decomposition temperature [°C]	300
Particle characteristics	No information available.

### 9.2 Other information

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known if used as directed.  
The product is hygroscopic.

### 10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).  
Decomposes begins at ca. 360 °C.

### 10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.

### 10.4 Conditions to avoid

See SECTION 7.2.



#### **10.5 Incompatible materials**

Sensitive to moisture.

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

No hazardous decomposition products known.

## SECTION 11: Toxicological information

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

#### Acute oral toxicity

Product
ATE-mix, Rat, > 5000 mg/kg bw
Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
LD50, oral, mouse, 2410 - 5530 mg/kg bw
2-(2-(2-Butoxyethoxy)ethoxy)ethanol, CAS: 143-22-6
LD50, oral, Rat, 5000 - 11300 mg/kg bw
LD0, oral, Rat, 5 mL/kg bw
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
LD50, oral, Rat, 7128 mg/kg
Poly(oxy-1,2-ethanediyl), $\alpha$ -butyl- $\omega$ -hydroxy, CAS: 9004-77-7
LD50, oral, Rat, 2000 - 2630 mg/kg bw
Tris[2-(2-(2-methoxyethoxy)ethoxy)ethyl]orthoborate, CAS: 30989-05-0
LD50, oral, Rat, > 2000 mg/kg

#### Acute dermal toxicity

Product
ATE-mix, Rabbit, > 3000 mg/kg bw
Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
LD50, dermal, Rabbit, 2764 mg/kg bw
2-(2-(2-Butoxyethoxy)ethoxy)ethanol, CAS: 143-22-6
LC50, dermal, Rabbit, 3540 mg/kg bw
LDLo, dermal, Rabbit, 2000 mg/kg bw
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
LD50, dermal, Rabbit, 9404 mg/kg
Poly(oxy-1,2-ethanediyl), $\alpha$ -butyl- $\omega$ -hydroxy, CAS: 9004-77-7
LD50, dermal, Rabbit, 3540 mg/kg bw
Tris[2-(2-(2-methoxyethoxy)ethoxy)ethyl]orthoborate, CAS: 30989-05-0
LD50, dermal, Rat, > 2000 mg/kg

#### Acute inhalational toxicity

Substance
2-(2-(2-Butoxyethoxy)ethoxy)ethanol, CAS: 143-22-6
LC50, inhalative, Rat, 2.4 mg/L air
LCLO, inhalative, Rat, 1.2 mg/L air, 8h
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
LC0, inhalation (vapour), Rat, > 1.2 mg/l 6h

#### Serious eye damage/irritation

Based on the available information, the classification criteria are fulfilled.  
 Irritant  
 Calculation method

Substance
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2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
irritant
irritant
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
Eye, non-irritating
Tris[2-(2-(2-methoxyethoxy)ethoxy)ethyl]orthoborate, CAS: 30989-05-0
no adverse effect observed

**Skin corrosion/irritation** Based on the available information, the classification criteria are not fulfilled.

Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
Study, non-irritating
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
dermal, non-irritating
Tris[2-(2-(2-methoxyethoxy)ethoxy)ethyl]orthoborate, CAS: 30989-05-0
no adverse effect observed

**Respiratory or skin sensitisation** Based on the available information, the classification criteria are not fulfilled.

Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
dermal, Study, non-sensitizing
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
dermal, non-sensitizing
Tris[2-(2-(2-methoxyethoxy)ethoxy)ethyl]orthoborate, CAS: 30989-05-0
dermal, no adverse effect observed

**Specific target organ toxicity — single exposure** Based on the available information, the classification criteria are not fulfilled.

**Specific target organ toxicity — repeated exposure** Based on the available information, the classification criteria are not fulfilled.

Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
NOAEL, dermal, Rat, 200 mg/kg bw/day, adverse effect observed
NOAEL, oral, Rat, 250 mg/kg bw/day, adverse effect observed
NOAEC, inhalative, 94 mg/m³, adverse effect observed
2-2'-oxybisethanol, CAS: 111-46-6
NOAEL, dermal, Dog, 2220 - 4440 mg/kg bw/day
NOAEL, oral, Rat, 128 - 936 mg/kg bw/day
2-(2-(2-Butoxyethoxy)ethoxy)ethanol, CAS: 143-22-6
NOAEL, dermal, Rat, 5000 mg/kg bw/day
NOAEL, oral, Rat, 500 mg/kg bw/day

**Mutagenicity** Based on the available information, the classification criteria are not fulfilled.

Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
oral, mouse, In vivo study, negativ
Tris[2-(2-(2-methoxyethoxy)ethoxy)ethyl]orthoborate, CAS: 30989-05-0
in vitro, negativ

**Reproduction toxicity** Suspected of damaging the unborn child.  
 Calculation method

Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
NOAEL, oral, Rat, > 633 mg/kg bw/day, no adverse effect observed, Effects on developmental toxicity,
NOAEL, oral, Rat, > 1000 mg/kg bw/day, no adverse effect observed, Effects on fertility,
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
NOAEL, dermal, Rabbit, 50 mg/kg bw/day, adverse effect observed, Effect on developmental toxicity,
NOAEL, oral, 200 mg/kg bw/day, adverse effect observed, Effect on developmental toxicity,
Tris[2-(2-(2-methoxyethoxy)ethoxy)ethyl]orthoborate, CAS: 30989-05-0
NOAEL, oral, Rat, 1000 mg/kg bw/d (Effect on developmental toxicity), no adverse effect observed
NOAEL, oral, Rat, 300 mg/kg bw/day (Effect on fertility)

**Carcinogenicity** Based on the available information, the classification criteria are not fulfilled.

**Aspiration hazard** Based on the available information, the classification criteria are not fulfilled.

**General remarks**

Toxicological data of complete product are not available.  
 The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists.

**11.2 Information on other hazards**

**Endocrine disrupting properties** No information available.

**Other information** none

## SECTION 12: Ecological information

### 12.1 Toxicity

Substance
2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5
LC50, (96h), fish, 1.3 g/L
EC50, (48h), Invertebrates, 100 mg/L
EC50, (4d), Algae, 100 mg/L
2-2'-oxybisethanol, CAS: 111-46-6
LC50, (96h), fish, 75.2 g/L
LC50, (28d), fish, 1.5 g/L
EC50, (4d), Algae, 6.5 - 13 g/L
EC50, (24h), Invertebrates, 10 g/L
EC50, (21d), Invertebrates, 33.911 g/L
2-(2-(2-Butoxyethoxy)ethoxy)ethanol, CAS: 143-22-6
LC50, (96h), fish, 2.182 - 14.257 g/L
LC50, (48h), fish, 2.4 g/L
LC50, (24h), fish, 2.4 - 2.967 g/L
EC50, (21d), Invertebrates, 518.3 mg/L
EC50, (72h), Algae, 500 - 3211 mg/L
IC50, (16h), Water microorganisms, 5 g/L
LC0, (96h), fish, 2.15 g/L
NOEC, (21d), Invertebrates, 97.7 - 174.6 mg/L
NOEC, (21d), fish, 174.6 mg/L
NOEC, (72h), Algae, 62.5 - 499 mg/L
LC100, (96h), fish, 4.6 g/L
EC10, (72h), Algae, 151 - 1185 mg/L
EC10, (21d), Invertebrates, 233.9 - 235.6 mg/L
EC20, (72h), Algae, 270 - 364 mg/L
2-(2-Methoxyethoxy)ethanol, CAS: 111-77-3
LC50, (96h), Pimephales promelas, 5741 mg/L
EC50, (48h), Daphnia magna, 1192 mg/L
EC50, (96h), Pseudokirchneriella subcapitata, > 1000 mg/L
Poly(oxy-1,2-ethanediyl), $\alpha$ -butyl- $\omega$ -hydroxy, CAS: 9004-77-7
LC50, (96h), fish, 1.8 g/L
EC50, (48h), Acartia tonsa, 310 mg/L
EC50, (72h), Algae, 391 mg/L

### 12.2 Persistence and degradability

<b>Behaviour in environment compartments</b>	No information available.
<b>Behaviour in sewage plant</b>	No information available.
<b>Biological degradability</b>	No information available.

### 12.3 Bioaccumulative potential

No information available.

#### 12.4 Mobility in soil

No information available.

#### 12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

#### 12.6 Endocrine disrupting properties

No information available.

#### 12.7 Other adverse effects

Do not discharge product unmonitored into the environment or into the drainage.  
The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

##### Product

In according to RoHS!  
Coordinate disposal with the disposal contractor/authorities if necessary.

**Waste no. (recommended)** 160113\*

##### Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.  
Uncontaminated packaging may be taken for recycling.

**Waste no. (recommended)** 150102  
150104  
150110\* packaging containing residues of or contaminated by hazardous substances

### SECTION 14: Transport information

#### 14.1 UN number or ID number

**Transport by land according to ADR/RID** not applicable

**Inland navigation (ADN)** not applicable

**Marine transport in accordance with IMDG** not applicable

**Air transport in accordance with IATA** not applicable

#### 14.2 UN proper shipping name

Transport by land according to ADR/RID	NO DANGEROUS GOODS
Inland navigation (ADN)	NO DANGEROUS GOODS
Marine transport in accordance with IMDG	NOT CLASSIFIED AS "DANGEROUS GOODS"
Air transport in accordance with IATA	NOT CLASSIFIED AS "DANGEROUS GOODS"

#### 14.3 Transport hazard class(es)

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

#### 14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

#### 14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

#### 14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

#### 14.7 Maritime transport in bulk according to IMO instruments

not applicable

## SECTION 15: Regulatory information

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

<b>EEC-REGULATIONS</b>	2008/98/EC 2000/532/EC; 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
<b>TRANSPORT-REGULATIONS</b>	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)
<b>NATIONAL REGULATIONS (GB):</b>	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	0 %

### 15.2 Chemical safety assessment

For this product a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### 16.1 Hazard statements (SECTION 3)

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

## 16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route  
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses  
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure  
ATE = acute toxicity estimate  
CAS = Chemical Abstracts Service  
CLP = Classification, Labelling and Packaging  
DMEL = Derived Minimum Effect Level  
DNEL = Derived No Effect Level  
EC50 = Median effective concentration  
ECB = European Chemicals Bureau  
EEC = European Economic Community  
EINECS = European Inventory of Existing Commercial Chemical Substances  
EL50 = Median effective loading  
ELINCS = European List of Notified Chemical Substances  
EmS = Emergency Schedules  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
IC50 = Inhibition concentration, 50%  
IMDG = International Maritime Code for Dangerous Goods  
IUCLID = International Uniform Chemical Information Database  
IVIS = In vitro irritation score  
LC50 = Lethal concentration, 50%  
LD50 = Median lethal dose  
LC0 = lethal concentration, 0%  
LOAEL = lowest-observed-adverse-effect level  
LL50 = Median lethal loading  
LQ = Limited Quantities  
MARPOL = International Convention for the Prevention of Marine Pollution from Ships  
NOAEL = No Observed Adverse Effect Level  
NOEC = No Observed Effect Concentration  
PBT = Persistent, Bioaccumulative and Toxic substance  
PNEC = Predicted No-Effect Concentration  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals  
STP = Sewage Treatment Plant  
TLV@TWA = Threshold limit value – time-weighted average  
TLV@STEL = Threshold limit value – short-time exposure limit  
VOC = Volatile Organic Compounds  
vPvB = very Persistent and very Bioaccumulative

## 16.3 Other information

### Classification procedure

Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)  
Repr. 2: H361d Suspected of damaging the unborn child. (Calculation method)

### Modified position

none