

**SAFETY DATA SHEET** (91/155/EWG)**Zorgol 8**

Material no.		Version	1.2 / REG_EU
Specification	146107	Release Date	29.11.2006
VA-Nr	00055457	Print Date	11.05.2007
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**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name : Zorgol 8

Company : OXEA GmbH  
Werk Ruhrchemie  
Otto-Roelen-Str.3  
D-46147 Oberhausen

email : psq@oxea-chemicals.com

Telefax : +49 (0)208 693-2053

Emergency telephone number : +49 (0)208 693-2310  
(Werkfeuerwehr, OXEA Deutschland GmbH)

Use of the Substance / Preparation : intermediate  
Monomer  
Solvent

**2. COMPOSITION/INFORMATION ON INGREDIENTS****Chemical nature**

distillation residue  
CAS-No.: 68609-68-7  
EINECS-No.: 271-832-1

**Information on ingredients / Hazardous components**

- **2-ethylhexan-1-ol** <= 5%  
CAS-No. 104-76-7 EC-No. 203-234-3  
Xi; R36/38
- **2-ethylhexanal** <= 5%  
CAS-No. 123-05-7 EC-No. 204-596-5  
R10  
Xi; R38
- **2-ethylhex-2-enal** <= 5%  
CAS-No. 645-62-5 EC-No. 211-448-3  
R10  
Xi; R36/37/38  
R43
- **2-ethylhexane-1,3-diol** <= 5%  
CAS-No. 94-96-2 EC-No. 202-377-9  
Xi; R41
- **2-Ethyl-1,3-hexandiolmonobutyrate** <= 10%  
CAS-No. 28759-05-9
- **2-ethylhexyl butyrate** <= 5%  
CAS-No. 25415-84-3 EC-No. 246-959-0
- **2-Ethylhexyl 2-ethylhexanoate** <= 5%  
CAS-No. 7425-14-1 EC-No. 231-057-1  
Xi  
R36

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- **n-Butanal-di-n-butyl-acetale** <= 5%  
CAS-No. 5921-80-2
- **3,5-Diethyl-4-propyl-tetrahydropyrane** <= 10%  
CAS-No.
- **3,5-Diethyl-4-propyl-tetrahydro-4H-pyran-2-ol** <= 10%  
CAS-No.
- **Bis(2-ethylhexyl) ether** >= 15% - <= 20%  
CAS-No. 10143-60-9 EC-No. 233-412-6
- **2-Ethylhexyl-2-ethylhexenyl ether** Ø 1%  
CAS-No. 6624-00-6
- **3,5-Diethyl-4-propyl-tetrahydro-2pyranone** <= 10%  
CAS-No. 57778-94-6

See chapter 16 for text of risk phrases

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**3. HAZARDS IDENTIFICATION**

Irritant

Irritating to skin.

May cause sensitization by skin contact.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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**4. FIRST AID MEASURES****General advice**

Take care of your own personal safety.

Remove contaminated or saturated clothing immediately and dispose of safely.

**Inhalation**

See that there is fresh air.

If symptoms persist, call a physician.

**Skin contact**

After contact with skin, wash immediately with plenty of soap and water.

If symptoms persist, call a physician.

**Eye contact**

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Ingestion**

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

**Notes to physician**

Symptomatic treatment.

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**5. FIRE-FIGHTING MEASURES****Suitable extinguishing media**

Water spray, foam, CO2, dry powder.

**Extinguishing media which must not be used for safety reasons**

high volume water jet

**Specific hazards during fire fighting**

In the case of fire, the following hazardous smoke fumes may be produced: carbon monoxide, carbon dioxide.

Under certain fire conditions, traces of other toxic products may occur.

**Special protective equipment for fire-fighters**

wear a self contained respiratory apparatus

**Further information**

Cool container with jet of water spray from a safe distance

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**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Wear personal protective equipment; see section 8.

Avoid contact with the skin and the eyes.

Do not inhale vapours / aerosols.

**Environmental precautions**

Prevent spreading over a wide area (e.g. by containment or oil barriers).

Do not allow to sink into ground water, sewers or into surface water.

**Methods for cleaning up**

Absorb with liquid-binding material (e.g. sand diatomaceous earth acid neutralizer universal binder saw dust).

Dispose of contaminated material as a waste in a correct manner.

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**7. HANDLING AND STORAGE****Handling****Safe handling advice**

Wear personal protective equipment; see section 8.

Avoid contact with skin and eyes.

Do not inhale vapours / aerosols.

Provide sufficient ventilation and exhaust at the workplace.

**Advice on protection against fire and explosion**

To cool, spray closed containers with water spray jet. In case of fire, remove the endangered containers and bring to a safe place, if this can be done safely.

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharges.

**Temperature class**

Temperature classification T 3.

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**Storage****Further information**

Keep container tightly sealed and store in a dry, well-ventilated place.

**German storage class**

3B - Combustible Liquids

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Components with workplace control parameters****Other information**

MAK (DFG/D): 50 ml/m<sup>3</sup>, 270 mg/m<sup>3</sup>  
2-ethylhexanol

**Personal protective equipment****Hand protection**

Glove material	nitrile rubber, Fleximax
Material thickness	0.55 mm
Break through time	> 480 min
Method	DIN EN 374, Source: COMASEC GmbH
Glove material	Wear protective gloves made of the following materials: PVC.
Material thickness	0.8 mm

Selection of protective gloves to meet the requirements of specific workplaces.

The information is based on our own tests, references from the literature and information from glove manufacturers, or derived by analogy with similar materials.

Remember that the useful time per day of a chemical protection glove may be much shorter than the permeation time determined according to EN 374 due to the many different influential factors involved (e.g. temperature).

**Eye protection**

protective goggles or face protection

**Skin and body protection**

suitable protective clothing

Select materials and equipment for physical protection depending on the concentration and volume of hazardous substances and the workplace involved.

**Hygiene measures**

Smoking, eating and drinking should be prohibited in the application area.

Remove immediately all contaminated clothing.

Wash hands before breaks and at the end of workday.

Cleanse and apply cream to skin after work.

**Protective measures**

Avoid contact with the skin and the eyes.

Do not breathe in vapours or aerosols.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form	liquid
Colour	yellow

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Odour ester-like

**Safety data**

pH	ca. 6.3	(3 g/l)	(20 °C)
Melting point/range	ca. -60 °C		
	Method:	DIN / ISO 3016	
Boiling point/range	ca. 205 - 320 °C		(1013 hPa)
	Method:	DIN 53171	
Flash point	ca. 93 °C		
	Method:	DIN EN 22 719	
Ignition temperature	ca. 265 °C		
	Method:	DIN 51 794	
Density	ca. 0.89 g/cm <sup>3</sup>		(20 °C)
	Method:	DIN 51757	
Water solubility	ca. 3 g/l		(20 °C)
Viscosity, dynamic	ca. 10 mPa.s		(20 °C)
	Method:	DIN 51 562	

**10. STABILITY AND REACTIVITY**

Hazardous decomposition products	None known
Thermal decomposition	No decomposition if used as directed. Distills without decomposition at atmospheric pressure.
Hazardous reactions	No dangerous reactions have been known to occur in conjunction with the proper use to the product.

**11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity	LD50 Rat: > 5000 mg/kg Method: OECD Guide-line 401
Skin irritation	Rabbit moderately irritating Method: OECD Guide-line 404
Eye irritation	Rabbit slightly irritating Method: OECD Guide-line 405
Sensitization	May cause sensitization by skin contact. related to substance: 2-ethylhex-2-enal

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**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

Biodegradability	Exposure time: 28 d
	Result: > 20 % Not readily biodegradable.
	Method: OECD TG 301 A

**Behaviour in environmental compartments****Ecotoxicity effects**

Toxicity to fish	LC50 Brachydanio rerio (zebra fish): ca. 50 mg/l / 96 h
	Method: OECD TG 203
Toxicity to bacteria	EC50 local activated sludge: > 1000 mg/l / 0.5 h
	Method: OECD 209

**Further information on ecology**

Further Information	Prevent uncontrolled release in the environment.
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**13. DISPOSAL CONSIDERATIONS****Product**

In compliance with actual waste regulations, the product must be brought to a suitable disposal plant. No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer.

The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority.

**Uncleaned packaging**

Contaminated packaging should ideally be emptied; it can then be recycled after having been decontaminated.

**14. TRANSPORT INFORMATION****Inland waterway transport ADN/ADNR/GGVBinSch (Germany)**

Class	9
ADR/RID-Labels	
UN-No / Substance number	9003
Packaging group	
Description of the goods (Technical name)	
	STOFFE MIT EINEM FLAMMPUNKT ÜBER 61 °C UND HÖCHSTEN 100 °C
	(2-Ethyl-1-Hexanol)

**Loading instructions/Remarks**

ADR	Not classified as dangerous for conveyance in the meaning of the Carriage of Dangerous Goods by Road and Rail (ADR / RID).
RID	Not classified as dangerous for conveyance in the meaning of the

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	Carriage of Dangerous Goods by Road and Rail (ADR / RID).
IMDG	Not classified as hazardous sea cargo (IMDG code)
IATA_C	Not hazardous freight in air traffic (ICAO-TI / IATA-DGR).
IATA_P	Not hazardous freight in air traffic (ICAO-TI / IATA-DGR).
ADNR	Dangerous goods class 9, Identification-No. 9003 ADNR, when only transported by inland waterways tanker.

**15. REGULATORY INFORMATION****Labelling according to EC Directives**

Statutory basis/list According to the Dangerous Preparations Directive (1999/45/EG):

**hazard-defining component(s)**

- 2-ethylhex-2-enal

<b>Symbol(s)</b>	Xi	Irritant
<b>R-phrase(s)</b>	R38 R43 R52/53	Irritating to skin. May cause sensitization by skin contact. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>S-phrase(s)</b>	S24 S36/37 S61	Avoid contact with skin. Wear suitable protective clothing and gloves. Avoid release to the environment. Refer to special instructions/safety data sheets.

**National legislation**

employment restriction	The employment limitations under the protection of young persons act, the laws on pregnant women and young mothers and work at home is/are to be observed.
Other regulations	All national and local regulations have to be followed.

**16. OTHER INFORMATION****Risk phrase (R phrase) texts**

- **2-ethylhexan-1-ol**  
R36/38 Irritating to eyes and skin.
- **2-ethylhexanal**  
R10 Flammable.  
R38 Irritating to skin.
- **2-ethylhex-2-enal**  
R10 Flammable.  
R36/37/38 Irritating to eyes, respiratory system and skin.  
R43 May cause sensitization by skin contact.
- **2-ethylhexane-1,3-diol**  
R41 Risk of serious damage to eyes.
- **2-Ethylhexyl 2-ethylhexanoate**  
R36 Irritating to eyes.

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**1.2 / REG\_EU****29.11.2006****11.05.2007****8 / 8****Further information**

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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