

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

### Hypoid-Getriebeoel (GL5) LS SAE 85W-90

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

##### Relevant identified uses of the substance or mixture:

Gear lubricant

##### Uses advised against:

No information available at present.

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

LIQUI MOLY GmbH  
Jerg-Wieland-Str. 4  
89081 Ulm-Lehr  
Tel.: (+49) 0731-1420-0  
Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

##### Emergency information services / official advisory body:

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##### Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)  
+1 872 5888271 (LMR)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Skin Sens.	1	H317-May cause an allergic skin reaction.
Aquatic Chronic	3	H412-Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labeling according to Regulation (EC) 1272/2008 (CLP)



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## Warning

H317-May cause an allergic skin reaction. H412-Harmful to aquatic life with long lasting effects.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.  
 P261-Avoid breathing vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves.  
 P333+P313-If skin irritation or rash occurs: Get medical advice / attention.  
 P501-Dispose of contents / container to an approved waste disposal facility.

Amines, C10-14-tert-alkyl

## 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

n.a.

### 3.2 Mixtures

<b>Distillates (petroleum), solvent-dewaxed heavy paraffinic</b>	
<b>Registration number (REACH)</b>	01-2119471299-27-XXXX
<b>Index</b>	649-474-00-6
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	265-169-7
<b>CAS</b>	64742-65-0
<b>content %</b>	0,5-<5
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Asp. Tox. 1, H304

<b>Amines, C10-14-tert-alkyl</b>	
<b>Registration number (REACH)</b>	01-2119456798-18-XXXX
<b>Index</b>	---
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	701-175-2
<b>CAS</b>	---
<b>content %</b>	0,25-<1
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Acute Tox. 2, H330 Acute Tox. 3, H311 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

<b>C16-18-(even numbered, saturated and unsaturated)-alkylamines</b>	
<b>Registration number (REACH)</b>	01-2119473797-19-XXXX
<b>Index</b>	---
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	627-034-4
<b>CAS</b>	1213789-63-9
<b>content %</b>	0,01-<0,1

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**Classification according to Regulation (EC) 1272/2008 (CLP), M-factors**

Acute Tox. 4, H302  
Skin Corr. 1B, H314  
Eye Dam. 1, H318  
STOT SE 3, H335  
STOT RE 2, H373 (gastrointestinal tract, liver, immune system) (oral)  
Asp. Tox. 1, H304  
Aquatic Acute 1, H400 (M=10)  
Aquatic Chronic 1, H410 (M=10)

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.  
For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.  
The substances named in this section are given with their actual, appropriate classification!  
For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.  
Impurities, test data and additional information may have been taken into account in classifying and labelling the product.  
The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

First-aiders should ensure they are protected!  
Never pour anything into the mouth of an unconscious person!

**Inhalation**

Remove person from danger area.  
Supply person with fresh air and consult doctor according to symptoms.

**Skin contact**

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

**Eye contact**

Remove contact lenses.  
Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

**Ingestion**

Rinse the mouth thoroughly with water.  
Do not induce vomiting. Consult doctor immediately.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

The following may occur:

Drying of the skin.  
Dermatitis (skin inflammation)  
Allergic reaction possible.  
On vapour formation:  
Irritation of the respiratory tract  
Ingestion:  
Gastrointestinal disturbances  
Nausea  
Vomiting

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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

Symptomatic treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

CO2  
Foam  
Dry extinguisher

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## Unsuitable extinguishing media

High volume water jet

## 5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Aldehydes

Oxides of phosphorus

Metal oxides

Oxides of nitrogen

Hydrocarbons

Oxides of sulphur

## 5.3 Advice for firefighters

For personal protective equipment see Section 8.

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

## SECTION 6: Accidental release measures

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

#### 6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.

Ensure sufficient ventilation, remove sources of ignition.

Avoid dust formation with solid or powder products.

Leave the danger zone if possible, use existing emergency plans if necessary.

Avoid formation of oil mist.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

#### 6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

If accidental entry into drainage system occurs, inform responsible authorities.

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

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

Oil binder

Do not wash away with water or watery cleaning agents.

### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

## SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

### 7.1 Precautions for safe handling

#### 7.1.1 General recommendations

Avoid formation of oil mist.

Ensure good ventilation.

Keep away from sources of ignition - Do not smoke.

Do not heat to temperatures close to flash point.

Avoid contact with eyes.

Avoid long lasting or intensive contact with skin.

Do not carry cleaning cloths soaked in product in trouser pockets.

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Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
 Observe directions on label and instructions for use.  
 Use working methods according to operating instructions.

### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.  
 Wash hands before breaks and at end of work.  
 Keep away from food, drink and animal feedingstuffs.  
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

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

Keep out of access to unauthorised individuals.  
 Not to be stored in gangways or stair wells.  
 Store product closed and only in original packing.  
 Store at room temperature.  
 Store in a dry place.

### 7.3 Specific end use(s)

No information available at present.  
 Observe the instructions for good working practice and the recommendations for risk assessment.  
 Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Chemical Name	Oil mist, mineral		
WEL-TWA: 5 mg/m3 (Mineral oil, excluding metal working fluids, ACGIH)	WEL-STEL: ---	---	
Monitoring procedures:	- Draeger - Oil Mist 1/a (67 33 031)		
BMGV: ---	Other information: ---		

Distillates (petroleum), solvent-dewaxed heavy paraffinic						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - oral (animal feed)		PNEC	9,33	mg/kg feed	
Consumer	Human - inhalation	Long term, local effects	DNEL	1,19	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,74	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	5,58	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2,73	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,97	mg/kg bw/d	

Amines, C10-14-tert-alkyl						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,001	mg/l	
	Environment - marine		PNEC	0	mg/l	
	Environment - sediment, freshwater		PNEC	2,14	mg/kg dw	
	Environment - sediment, marine		PNEC	0,214	mg/kg dw	
	Environment - soil		PNEC	0,428	mg/kg dw	
	Environment - sewage treatment plant		PNEC	0,635	mg/l	

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	Environment - water, sporadic (intermittent) release		PNEC	0,004	mg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,35	mg/kg bw/day	

**C16-18-(even numbered, saturated and unsaturated)-alkylamines**

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,26	µg/l	
	Environment - marine		PNEC	0,026	µg/l	
	Environment - sediment, freshwater		PNEC	3,76	mg/kg dw	
	Environment - sediment, marine		PNEC	0,376	mg/kg dw	
	Environment - soil		PNEC	10	mg/kg dw	
	Environment - sewage treatment plant		PNEC	550	µg/l	
	Environment - water, sporadic (intermittent) release		PNEC	1,6	µg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,04	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,035	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	1	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,09	mg/kg	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	1	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,38	mg/m <sup>3</sup>	

**Distillates (petroleum), hydrotreated heavy paraffinic**

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - oral (animal feed)		PNEC	9,33	mg/kg feed	

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).  
 (8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE).  
 (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).  
 (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.  
 \*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.  
 (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.  
 If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.  
 Applies only if maximum permissible exposure values are listed here.

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Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.  
These are specified by e.g. EN 14042.  
EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.  
Wash hands before breaks and at end of work.  
Keep away from food, drink and animal feedingstuffs.  
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:  
Tight fitting protective goggles (EN 166) with side protection, with danger of splashes.

Skin protection - Hand protection:  
Protective gloves, oil resistant (EN ISO 374).  
If applicable  
Protective nitrile gloves (EN ISO 374).  
Minimum layer thickness in mm:  
0,5  
Permeation time (penetration time) in minutes:  
120  
Protective hand cream recommended.  
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.  
The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:  
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:  
Normally not necessary.  
With oil mist formation:  
Filter A2 P2 (EN 14387), code colour brown, white  
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:  
Not applicable

Additional information on hand protection - No tests have been performed.  
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.  
Selection of materials derived from glove manufacturer's indications.  
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.  
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.  
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.  
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Brown
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	Flammable
Lower explosion limit:	There is no information available on this parameter.
Upper explosion limit:	There is no information available on this parameter.
Flash point:	220 °C

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Auto-ignition temperature:	There is no information available on this parameter.
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	185 mm <sup>2</sup> /s (40°C)
Kinematic viscosity:	17,5 mm <sup>2</sup> /s (100°C)
Solubility:	Insoluble
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	There is no information available on this parameter.
Density and/or relative density:	0,9 g/ml
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.
<b>9.2 Other information</b>	
Explosives:	There is no information available on this parameter.
Oxidising liquids:	There is no information available on this parameter.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product has not been tested.

### 10.2 Chemical stability

Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

No decomposition if used as intended.

### 10.4 Conditions to avoid

Heating, open flame, ignition sources  
Protect from humidity.

### 10.5 Incompatible materials

Avoid contact with strong oxidizing agents.  
Avoid contact with strong acids.

### 10.6 Hazardous decomposition products

No decomposition when used as directed.

## SECTION 11: Toxicological information

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

Possibly more information on health effects, see Section 2.1 (classification).

#### Hypoid-Getriebeoel (GL5) LS SAE 85W-90

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:	ATE	2000	mg/kg			calculated value
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			calculated value, Vapours
Acute toxicity, by inhalation:	ATE	>5	mg/l/4h			calculated value, Aerosol
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

#### Distillates (petroleum), solvent-dewaxed heavy paraffinic

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
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Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LD50	>5,53	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Analogous conclusion
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant, Analogous conclusion
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact), Analogous conclusion
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative, Analogous conclusion Chinese hamster
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative, Analogous conclusion
Carcinogenicity:				Mouse	OECD 451 (Carcinogenicity Studies)	Negative, Analogous conclusion 78 weeks, dermal
Reproductive toxicity (Developmental toxicity):				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion dermal
Carcinogenicity:				Mouse		Female, Negative
Reproductive toxicity:				Rat		Negative
Reproductive toxicity (Effects on fertility):				Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	Negative, Analogous conclusion oral, dermal
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	~1000	mg/kg bw/d	Rabbit	OECD 410 (Repeated Dose Dermal Toxicity - 90-Day)	Analogous conclusion
Aspiration hazard:						Yes
Symptoms:						mucous membrane irritation, dizziness, nausea
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	30	mg/kg/d	Rat	OECD 411 (Subchronic Dermal Toxicity - 90-day Study)	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	0,22	mg/l	Rat		Aerosol, Analogous conclusion 4 weeks
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	0,15	mg/l	Rat		Aerosol, Analogous conclusion 13 weeks

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Amines, C10-14-tert-alkyl						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	612	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	251	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	1,19	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours, Female
Acute toxicity, by inhalation:	LC50	1,7	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours, Male
Skin corrosion/irritation:				Rabbit		Skin Corr. 1B
Serious eye damage/irritation:				Rabbit		Eye Dam. 1
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Skin Sens. 1A
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	NegativeChinese hamster
Reproductive toxicity (Developmental toxicity):	NOAEL	5	mg/kg bw/d	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative dermal
Reproductive toxicity (Effects on fertility):				Rat	OECD 415 (One-Generation Reproduction Toxicity Study)	Negative oral
Specific target organ toxicity - single exposure (STOT-SE):						Irritation of the respiratory tract
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	20	mg/kg	Rat	OECD 410 (Repeated Dose Dermal Toxicity - 90-Day)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	19	mg/m3	Rat	OECD 412 (Subacute Inhalation Toxicity - 28-Day Study)	Vapours 4 weeks

C16-18-(even numbered, saturated and unsaturated)-alkylamines						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1689	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Acute toxicity, by inhalation:	LD50	>0,099	mg/l/1h	Rat	OECD 403 (Acute Inhalation Toxicity)	Analogous conclusion, Aerosol
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Corr. 1B
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Dam. 1, Analogous conclusion
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact), Analogous conclusion
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Mammalian	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity (Effects on fertility):	NOAEL	12,5	mg/kg	Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	Negative, Analogous conclusion

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Specific target organ toxicity - single exposure (STOT-SE):						Irritation of the respiratory tract, STOT SE 3, H335
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	3,25	mg/kg/d	Rat	OECD 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)	Target organ(s): gastrointestinal tract, liver, immune system
Aspiration hazard:						Yes

## 11.2. Information on other hazards

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties:						Does not apply to mixtures.
Other information:						No other relevant information available on adverse effects on health.

## SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							Isolate as much as possible with an oil separator.
12.3. Bioaccumulative potential:							Concentration in organisms possible.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.

Distillates (petroleum), solvent-dewaxed heavy paraffinic							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Salmo gairdneri		
12.1. Toxicity to fish:	LC50	96h	>5000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	21d	1000	mg/l	Oncorhynchus mykiss	QSAR	
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	10	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	Analogous conclusion

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12.1. Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	96h	>1000	mg/l	Scenedesmus subspicatus		
12.2. Persistence and degradability:		28d	6	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	31	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily biodegradable (Analogous conclusion)
12.3. Bioaccumulative potential:	Log Pow		>3				Low
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC20	6h	>1000	mg/l	Pseudomonas fluorescens		

**Amines, C10-14-tert-alkyl**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1,3	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	>60d	0,078	mg/l	Oncorhynchus mykiss	OECD 210 (Fish, Early-Life Stage Toxicity Test)	96d
12.1. Toxicity to daphnia:	EC50	48h	2,5	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	0,44	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,05	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	21,8	%	activated sludge	OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		2,9				Low 23 °C
Toxicity to bacteria:	EC50	30min	63,5	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

**C16-18-(even numbered, saturated and unsaturated)-alkylamines**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LL50	96h	0,06	mg/l	Pimephales promelas		Analogous conclusion EPA OPPTS 850.1085

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12.1. Toxicity to daphnia:	EL50	48h	0,011	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	72h	0,46	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.1. Toxicity to algae:	EL50	96h	0,04	mg/l	Selenastrum capricornutum		
12.2. Persistence and degradability:		28d	66	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable, Analogous conclusion
12.3. Bioaccumulative potential:	Log Pow		4,33				High
Toxicity to bacteria:	EL50	3h	32	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	Analogous conclusion

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

Soaked polluted cloths, paper or other organic materials represent a fire hazard and should be controlled, collected and disposed of.  
EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

13 02 05 mineral-based non-chlorinated engine, gear and lubricating oils

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. dispose at suitable refuse site.

E.g. suitable incineration plant.

#### For contaminated packing material

Pay attention to local and national official regulations.

15 01 01 paper and cardboard packaging

15 01 02 plastic packaging

15 01 04 metallic packaging

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

## SECTION 14: Transport information

### General statements

#### Transport by road/by rail (ADR/RID)

14.1. UN number or ID number: Not applicable

14.2. UN proper shipping name:

Not applicable

14.3. Transport hazard class(es): Not applicable

14.4. Packing group: Not applicable

14.5. Environmental hazards: Not applicable

Tunnel restriction code: Not applicable

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Classification code: Not applicable  
 LQ: Not applicable  
 Transport category: Not applicable

**Transport by sea (IMDG-code)**

14.1. UN number or ID number: Not applicable  
 14.2. UN proper shipping name: Not applicable  
 Not applicable  
 14.3. Transport hazard class(es): Not applicable  
 14.4. Packing group: Not applicable  
 14.5. Environmental hazards: Not applicable  
 Marine Pollutant: Not applicable  
 EmS: Not applicable

**Transport by air (IATA)**

14.1. UN number or ID number: Not applicable  
 14.2. UN proper shipping name: Not applicable  
 Not applicable  
 14.3. Transport hazard class(es): Not applicable  
 14.4. Packing group: Not applicable  
 14.5. Environmental hazards: Not applicable

**14.6. Special precautions for user**

Unless specified otherwise, general measures for safe transport must be followed.

**14.7. Maritime transport in bulk according to IMO instruments**

Non-dangerous material according to Transport Regulations.

**SECTION 15: Regulatory information**

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

Observe restrictions:  
 Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!  
 Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): 0,75 %

National requirements/regulations on safety and health protection must be applied when using work equipment.

**15.2 Chemical safety assessment**

A chemical safety assessment is not provided for mixtures.

**SECTION 16: Other information**

Revised sections: 2, 3, 6, 7, 8, 12, 15, 16

These details refer to the product as it is delivered.  
 Employee instruction/training in handling hazardous materials is required.

**Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):**

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Skin Sens. 1, H317	Classification according to calculation procedure.
Aquatic Chronic 3, H412	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.

- H330 Fatal if inhaled.
- H373 May cause damage to organs through prolonged or repeated exposure if swallowed.
- H317 May cause an allergic skin reaction.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.

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H311 Toxic in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H318 Causes serious eye damage.  
 H335 May cause respiratory irritation.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.

Skin Sens. — Skin sensitization  
 Aquatic Chronic — Hazardous to the aquatic environment - chronic  
 Asp. Tox. — Aspiration hazard  
 Acute Tox. — Acute toxicity - inhalation  
 Acute Tox. — Acute toxicity - dermal  
 Acute Tox. — Acute toxicity - oral  
 Skin Corr. — Skin corrosion  
 Eye Dam. — Serious eye damage  
 Aquatic Acute — Hazardous to the aquatic environment - acute  
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation  
 STOT RE — Specific target organ toxicity - repeated exposure

### Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.  
 Guidelines for the preparation of safety data sheets as amended (ECHA).  
 Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).  
 Safety data sheets for the constituent substances.  
 ECHA Homepage - Information about chemicals.  
 GESTIS Substance Database (Germany).  
 German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).  
 EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.  
 National Lists of Occupational Exposure Limits for each country as amended.  
 Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

### Any abbreviations and acronyms used in this document:

acc., acc. to according, according to  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ASTM ASTM International (American Society for Testing and Materials)  
 ATE Acute Toxicity Estimate  
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)  
 BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)  
 BCF Bioconcentration factor  
 BSEF The International Bromine Council  
 bw body weight  
 CAS Chemical Abstracts Service  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 DOC Dissolved organic carbon  
 dw dry weight  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)  
 EC European Community  
 ECHA European Chemicals Agency  
 ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect  
 EEC European Economic Community  
 EINECS European Inventory of Existing Commercial Chemical Substances

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ELINCS European List of Notified Chemical Substances  
 EN European Norms  
 EPA United States Environmental Protection Agency (United States of America)  
 ErCx, EµCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)  
 etc. et cetera  
 EU European Union  
 EVAL Ethylene-vinyl alcohol copolymer  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential  
 Koc Adsorption coefficient of organic carbon in the soil  
 Kow octanol-water partition coefficient  
 IARC International Agency for Research on Cancer  
 IATA International Air Transport Association  
 IBC (Code) International Bulk Chemical (Code)  
 IMDG-code International Maritime Code for Dangerous Goods  
 incl. including, inclusive  
 IUCLID International Uniform Chemical Information Database  
 IUPAC International Union for Pure Applied Chemistry  
 LC50 Lethal Concentration to 50 % of a test population  
 LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)  
 Log Koc Logarithm of adsorption coefficient of organic carbon in the soil  
 Log Kow, Log Pow Logarithm of octanol-water partition coefficient  
 LQ Limited Quantities  
 MARPOL International Convention for the Prevention of Marine Pollution from Ships  
 n.a. not applicable  
 n.av. not available  
 n.c. not checked  
 n.d.a. no data available  
 NIOSH National Institute for Occupational Safety and Health (USA)  
 NLP No-longer-Polymer  
 NOEC, NOEL No Observed Effect Concentration/Level  
 OECD Organisation for Economic Co-operation and Development  
 org. organic  
 OSHA Occupational Safety and Health Administration (USA)  
 PBT persistent, bioaccumulative and toxic  
 PE Polyethylene  
 PNEC Predicted No Effect Concentration  
 ppm parts per million  
 PVC Polyvinylchloride  
 REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
 REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
 RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
 SVHC Substances of Very High Concern  
 Tel. Telephone  
 TOC Total organic carbon  
 UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
 VOC Volatile organic compounds  
 vPvB very persistent and very bioaccumulative  
 wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.  
 No responsibility.

These statements were made by:

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