



Revision date: 28 Aug 2023 Version: 6 Print date: 6 Sept 2023

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

* 1.1. Product identifier

Trade name/designation:

RAVENOL Bremsenreiniger

Article No.:

1360030

REACH No.:

01-2119473851-33

UFI:

V3DK-2A1F-5CCG-0X9D

CAS No.:

68290-06-9

EC No.:

920-750-0

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

Use of the substance/mixture:

Reiniger

* 1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Ravensberger Schmierstoffvertrieb GmbH

Produktsicherheit

Jöllenbecker Str. 2

33824 Werther

Germany

Telephone: +49 5203 9719 0

Telefax: +49 5203 9719 40

E-mail: kontakt@ravenol.de

Website: www.ravenol.de

E-mail (competent person): sdb@ravenol.de

* 1.4. Emergency telephone number

24 hr. emergency phone number, 24h: +49 700 24 112 112 (Contract ID: RAV) / +1 872 5888271 (Contract ID: RAV)

SECTION 2: Hazards identification

* 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
flammable liquids (<i>Flam. Liq. 2</i>)	H225: Highly flammable liquid and vapour.	On basis of test data.
Aspiration hazard (<i>Asp. Tox. 1</i>)	H304: May be fatal if swallowed and enters airways.	Calculation method.
STOT-single exposure (<i>STOT SE 3</i>)	H336: May cause drowsiness or dizziness.	Calculation method.
Hazardous to the aquatic environment (<i>Aquatic Chronic 2</i>)	H411: Toxic to aquatic life with long lasting effects.	Calculation method.



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* 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



GHS02
Flame



GHS07
Exclamation mark



GHS08
Health hazard



GHS09
Environment

Signal word: Danger

Hazard components for labelling:

Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics

Hazard statements for physical hazards

H225	Highly flammable liquid and vapour.
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Hazard statements for health hazards

H304	May be fatal if swallowed and enters airways.
------	---

H336	May cause drowsiness or dizziness.
------	------------------------------------

Hazard statements for environmental hazards

H411	Toxic to aquatic life with long lasting effects.
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Supplemental hazard information

EUH066	Repeated exposure may cause skin dryness or cracking.
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Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
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P102	Keep out of reach of children.
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Precautionary statements Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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P264	Wash hands thoroughly after handling.
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P271	Use only outdoors or in a well-ventilated area.
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P273	Avoid release to the environment.
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Precautionary statements Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/Emergency telephone number.
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P331	Do NOT induce vomiting.
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P391	Collect spillage.
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Precautionary statements Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
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P405	Store locked up.
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Precautionary statements Disposal

P501	Dispose of contents/container to an appropriate recycling or disposal facility.
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* 2.3. Other hazards

Other adverse effects:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

SECTION 3: Composition/information on ingredients

* 3.1. Substances

Additional information:

Regulation (EC) No. 648/2004 [Detergents regulation]: Contains: ≥ 30 % aliphatic hydrocarbons



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- * **5.3. Advice for firefighters**
Do not inhale explosion and combustion gases. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.
- * **5.4. Additional information**
Use water spray jet to protect personnel and to cool endangered containers.
Suppress gases/vapours/mists with water spray jet.
Fire class: B
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**
 - 6.1.1. For non-emergency personnel**
Personal precautions:
Use personal protection equipment. Special danger of slipping by leaking/spilling product.
Protective equipment:
Personal protection equipment: see section 8
Emergency procedures:
Eliminate all ignition sources if safe to do so. Remove persons to safety. Provide adequate ventilation.
 - 6.1.2. For emergency responders**
Personal protection equipment:
Use appropriate respiratory protection.
- * **6.2. Environmental precautions**
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
- * **6.3. Methods and material for containment and cleaning up**
For containment:
Suitable material for taking up: Sand, Kieselguhr, Universal binder, Chemical binding agents, containing acids
Prevent spread over a wide area (e.g. by containment or oil barriers).
For cleaning up:
Remove from the water surface (e.g. skimming, sucking). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
Other information:
Treat the recovered material as prescribed in the section on waste disposal.
- 6.4. Reference to other sections**
Safe handling: see section 7
Disposal: see section 13
Personal protection equipment: see section 8
- * **6.5. Additional information**
Clear spills immediately. Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

- * **7.1. Precautions for safe handling**
Protective measures
Advices on safe handling:
Wear personal protection equipment (refer to section 8).
When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Clear spills immediately. Use appropriate container to avoid environmental contamination.
Fire prevent measures:
Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.
Environmental precautions:
Shafts and sewers must be protected from entry of the product.



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Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

* 7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed. Keep locked up and out of reach of children. Keep only in original container. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Packaging materials:

Keep/Store only in original container.

Requirements for storage rooms and vessels:

Shafts and sewers must be protected from entry of the product. Floors should be impervious, resistant to liquids and easy to clean.

Keep only in the original container in a cool, well-ventilated place.

Do not store at temperatures above 50°C.

Take precautionary measures against static discharge.

Hints on storage assembly:

TRGS 510

Do not store together with: Oxidising agent, Pyrophoric or self-heating substances, Food and feedingstuffs

Storage class (TRGS 510, Germany): 3 – Flammable liquids

Further information on storage conditions:

Store in a cool dry place. Keep away from heat.

* 7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

No data available

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics CAS No.: 68290-06-9 EC No.: 920-750-0	2,035 mg/m ³	① DNEL worker ② Long-term - inhalation, systemic effects
Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics CAS No.: 68290-06-9 EC No.: 920-750-0	608 mg/m ³	① DNEL Consumer ② Long-term - inhalation, systemic effects
Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics CAS No.: 68290-06-9 EC No.: 920-750-0	773 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics CAS No.: 68290-06-9 EC No.: 920-750-0	699 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics CAS No.: 68290-06-9 EC No.: 920-750-0	699 mg/kg bw/day	① DNEL Consumer ② Long-term - oral, systemic effects

* 8.2. Exposure controls

8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.



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8.2.2. Personal protection equipment



Eye/face protection:

During transfer: Eye glasses with side protection
 DIN-/EN-Norms EN 166

Skin protection:

Hand protection

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: $\geq 0,4$ mm

Breakthrough time: 480 min

Breakthrough times and swelling properties of the material must be taken into consideration.

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.

Tested protective gloves must be worn: EN ISO 374

Suitable protective clothing: Protective clothing

Respiratory protection:

Usually no personal respirative protection necessary.

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

* 9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid

Colour: colourless

Odour: characteristic

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	<i>not applicable</i>		
Melting point	<i>not determined</i>		
Freezing point	<i>No data available</i>		
Initial boiling point and boiling range	100 – 140 °C		
Decomposition temperature	<i>No data available</i>		
Flash point	-1 °C		
Evaporation rate	<i>No data available</i>		
Auto-ignition temperature	250 °C		
Upper/lower flammability or explosive limits	0.8 – 6.5 Vol-%		
Vapour pressure	45 hPa	20 °C	
Vapour density	<i>No data available</i>		
Density	730 kg/m ³	20 °C	
Relative density	<i>not determined</i>		
Bulk density	<i>not applicable</i>		
Water solubility	Immiscible		
Partition coefficient: n-octanol/water	<i>not applicable</i>		
Dynamic viscosity	<i>not determined</i>		
Kinematic viscosity	<i>not determined</i>		
Lösemittelgehalt	< 100 %	20 °C	② organic solvents

* 9.2. Other information

Solvent content:



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organic solvents : 100,0 %
Water: 0,0 %
Solid content 0,0

SECTION 10: Stability and reactivity

- * **10.1. Reactivity**
No known hazardous reactions. Risk of explosion if heated under confinement.
 - * **10.2. Chemical stability**
The mixture is chemically stable under recommended conditions of storage, use and temperature.
 - 10.3. Possibility of hazardous reactions**
No hazardous reaction when handled and stored according to provisions.
 - * **10.4. Conditions to avoid**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.
 - * **10.5. Incompatible materials**
Oxidizing agent, Pyrophoric or self-heating substances
Strong acid
Alkali (lye), concentrated
 - * **10.6. Hazardous decomposition products**
Hazardous combustion products: Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides (NO_x)
During heating or in case of fire, toxic gases is possible.
Do not inhale explosion and combustion gases.
- Further information**
No information available.

SECTION 11: Toxicological information

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

Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics	CAS No.: 68290-06-9	EC No.: 920-750-0
LD₅₀ oral: 5,000 mg/kg (Rat)		
LD₅₀ dermal: 3,000 mg/kg (Rabbit)		
LC₅₀ Acute inhalation toxicity (vapour): 23 mg/L 4 h		

Acute oral toxicity:

Based on available data, the classification criteria are not met.

Acute dermal toxicity:

Based on available data, the classification criteria are not met.

Acute inhalation toxicity:

Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

Based on available data, the classification criteria are not met.

Serious eye damage/irritation:

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Based on available data, the classification criteria are not met.

STOT-single exposure:

May cause drowsiness or dizziness.

STOT-repeated exposure:

Based on available data, the classification criteria are not met.

Aspiration hazard:

May be fatal if swallowed and enters airways.
Observe risk of aspiration if vomiting occurs.



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For viscosity data, see section 9.

Additional information:

Frequently or prolonged contact with skin may cause dermal irritation.

* **11.2. Information on other hazards**

Endocrine disrupting properties:

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information:

No data available.

SECTION 12: Ecological information

* **12.1. Toxicity**

Aquatic toxicity:

Toxic to aquatic life with long lasting effects.

Additional ecotoxicological information:

Do not allow uncontrolled discharge of product into the environment.

* **12.2. Persistence and degradability**

Biodegradation:

Not readily biodegradable (according to OECD criteria)

* **12.3. Bioaccumulative potential**

Partition coefficient: n-octanol/water:

not applicable

Accumulation / Evaluation:

The product has not been tested.

* **12.4. Mobility in soil**

The product has not been tested.

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

Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics CAS No.: 68290-06-9 EC No.: 920-750-0

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

* **12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

* **13.1. Waste treatment methods**

Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal

**Waste codes/waste designations according to EWC/AVV
Directive 2008/98/EC (Waste Framework Directive)**

HP 3	Flammable
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 14	Ecotoxic

Waste code packaging

Remark:

Dispose of waste according to applicable legislation.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation.

Appropriate disposal / Package:

Non-contaminated packages may be recycled.



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Other disposal recommendations:

Consult the appropriate local waste disposal expert about waste disposal.

13.2. Additional information

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
UN 3295	UN 3295	UN 3295	UN 3295
14.2. UN proper shipping name			
HYDROCARBONS, LIQUID, N.O.S.	HYDROCARBONS, LIQUID, N.O.S.	HYDROCARBONS, LIQUID, N.O.S. (Hydrocarbons, C7-C9, n-alkanes, iso-alkanes, cyclics <2% aromatics)	HYDROCARBONS, LIQUID, N.O.S.
14.3. Transport hazard class(es)			
 3	 3	 3	 3
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
		 MARINE POLLUTANT	No
14.6. Special precautions for user			
Limited quantity (LQ): 1 L Hazard identification number (Kemler No.): 33 Classification code: F1 Tunnel restriction code: (D/E)	Limited quantity (LQ): 1 L Classification code: F1	Limited quantity (LQ): 1 L EmS-No.: F-E, S-D	No data available

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Restrictions on use:

Use restriction according to REACH annex XVII, no.: 3, 40

Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive], Hazard categories:

- P5a Flammable Liquids, Category 1 or 2
- P5b Flammable liquids
- P5c Flammable liquids of Categories 2 or 3, not covered by P5a and P5b
- E2 Hazardous to the Aquatic Environment in Category Chronic 2



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15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

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

Störfallverordnung (12. BlmschV)

for substances contained in the product:

Hazard categories:

- P5a Flammable Liquids, Category 1 or 2
- P5b Flammable liquids
- P5c Flammable liquids of Categories 2 or 3, not covered by P5a and P5b
- E2 Hazardous to the Aquatic Environment in Category Chronic 2
- P5c Flammable liquids of Categories 2 or 3, not covered by P5a and P5b
- E2 Hazardous to the Aquatic Environment in Category Chronic 2

Betriebssicherheitsverordnung (BetrSichV)

leichtentzündlich

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Klasse 1:

TA-Luft Class NK

Anteil 1:

100 %

Water hazard class

WGK:

1 - slightly hazardous to water

Description:

slightly hazardous to water

Source:

Self-classification (mixture; calculation rule).
Identification number 436

Remark:

Analogous classification:

Technische Regeln für Gefahrstoffe

TRGS 500
TRGS 510

Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)

Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868
Berufsgenossenschaftliche Regeln (DGUV-Regeln) 189, 190, 192, 195

* 15.2. Chemical Safety Assessment

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

* 15.3. Additional information

Tactile warning according to EN/ISO 11683. Child-resistant fastenings (EN/862/ISO 8317).

SECTION 16: Other information

* 16.1. Indication of changes

1.1.	Product identifier
1.3.	Details of the supplier of the safety data sheet
1.4.	Emergency telephone number
2.1.	Classification of the substance or mixture
2.2.	Label elements
2.3.	Other hazards
3.1.	Substances
4.1.	Description of first aid measures
4.2.	Most important symptoms and effects, both acute and delayed
4.3.	Indication of any immediate medical attention and special treatment needed
5.1.	Extinguishing media
5.2.	Special hazards arising from the substance or mixture
5.3.	Advice for firefighters
5.4.	Additional information



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6.1.	Personal precautions, protective equipment and emergency procedures
6.2.	Environmental precautions
6.3.	Methods and material for containment and cleaning up
6.5.	Additional information
7.1.	Precautions for safe handling
7.2.	Conditions for safe storage, including any incompatibilities
7.3.	Specific end use(s)
8.2.	Exposure controls
9.1.	Information on basic physical and chemical properties
9.2.	Other information
10.1.	Reactivity
10.2.	Chemical stability
10.4.	Conditions to avoid
10.5.	Incompatible materials
10.6.	Hazardous decomposition products
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
11.2.	Information on other hazards
12.1.	Toxicity
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
12.4.	Mobility in soil
12.5.	Results of PBT and vPvB assessment
12.6.	Endocrine disrupting properties
13.1.	Waste treatment methods
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
15.2.	Chemical Safety Assessment
15.3.	Additional information
16.1.	Indication of changes
16.4.	Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

16.3. Key literature references and sources for data

EC 1907/2006 - REACH Regulation
 1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006
 Regulation (EC) No 1907/2006 (REACH), Annex II
 European Chemicals Agency (ECHA), C & L classification and labeling inventory
 European Chemicals Agency (ECHA), ECHA CHEM Registered substances
 OECD The Global Portal to Information on Chemical Substances (ChemPortal)
 Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances
 Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances hazardous to water Rigoletto (catalog substances hazardous to water)

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
flammable liquids (<i>Flam. Liq. 2</i>)	H225: Highly flammable liquid and vapour.	On basis of test data.
Aspiration hazard (<i>Asp. Tox. 1</i>)	H304: May be fatal if swallowed and enters airways.	Calculation method.
STOT-single exposure (<i>STOT SE 3</i>)	H336: May cause drowsiness or dizziness.	Calculation method.
Hazardous to the aquatic environment (<i>Aquatic Chronic 2</i>)	H411: Toxic to aquatic life with long lasting effects.	Calculation method.



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16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

* Data changed compared with the previous version.