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 CVT KFE Fluid

Article No.:
1211134

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

Use of the substance/mixture:
Lubricant

*

1.3. Details of the supplier of the safety data sheet

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

Ravensberger Schmierstoffvertrieb GmbH
Jöllenbecker Str. 2
33824 Werther
D

Telephone: +49 5203 9719 0
Telefax: +49 5203 9719 40
E-mail: kontakt@ravenol.de
Website: www.ravenol.de
E-mail (competent person): technik@ravenol.de

*

1.4. Emergency telephone number

Abt. Technik (Produktsicherheit), 24h: +49 700 24 112 112 (Company ID: RAV) (outside USA/Canada) 011 49 700 24 112 112 (Company ID: RAV) (inside USA/Canada), +49 5203 9719 0 (Mo-Do 7.30 Uhr - 16.30 Uhr, Fr 7.30 Uhr - 13.15 Uhr) (Only available during office hours.)

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
Acute toxicity (inhalative) *(Acute Tox. 4)*	H332: Harmful if inhaled.	

*

2.2. Label elements

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

Hazard pictograms:

GHS07
Exclamation mark

Signal word: Warning

Hazard components for labelling:
N,N-Dimethyl-N-octadecylamine; 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol; Dec-1-ene, dimers, hydrogenated

hazard statements for health hazards	
H332	Harmful if inhaled.

Supplemental Hazard information (EU): -

Precautionary statements Prevention	
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.

Precautionary statements Response	
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor/Emergency telephone number if you feel unwell.

Precautionary statements Disposal	
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards
No data available

SECTION 3: Composition / information on ingredients

* ### 3.2. Mixtures
Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concen-tration
CAS No.: 68649-11-6 **EC No.:** 500-228-5	**Dec-1-ene, dimers, hydrogenated** Acute Tox. 4, Asp. Tox. 1 H304	15 – < 40 Wt %
CAS No.: 96-33-3 **EC No.:** 202-500-6	**methyl acrylate** Eye Irrit. 2 H319	2 – < 5 Wt %
CAS No.: 124-28-7 **EC No.:** 204-694-8	**N,N-Dimethyl-N-octadecylamine** Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1, Skin Corr. 1B H302-H314-H400-H410	0 – < 0.2 Wt %
CAS No.: 95-38-5 **EC No.:** 202-414-9	**2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol** Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1, STOT RE 2, Skin Corr. 1C  **Danger** H302-H314-H373-H400-H410	0 – < 0.1 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

* ### 4.1. Description of first aid measures
General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:
Provide fresh air. Consult a doctor immediately. Harmful if inhaled.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap. Consult a doctor immediately.

After eye contact:
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion:
Rinse mouth thoroughly with water. Do NOT induce vomiting. Consult a doctor immediately.

Self-protection of the first aider:
Use personal protection equipment. No direct artificial respiration to be given by first aider.

4.2. Most important symptoms and effects, both acute and delayed
There are no data available on the mixture itself.

* ### 4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically. Observe risk of aspiration if vomiting occurs.

SECTION 5: Firefighting measures

* 5.1. Extinguishing media

Suitable extinguishing media:

Co-ordinate fire-fighting measures to the fire surroundings.
Carbon dioxide (CO2)
Extinguishing powder
alcohol resistant foam
Use water spray jet to protect personnel and to cool endangered containers.

Unsuitable extinguishing media:

Full water jet

* 5.2. Special hazards arising from the substance or mixture

During heating or in case of fire, toxic gases is possible.
The formation of combustible vapours is possible at temperatures above: Flash point
When hot, product develops flammable vapours.

Hazardous combustion products:

Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), Gases/vapours, toxic
During heating or in case of fire, toxic gases is possible.

5.3. Advice for firefighters

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

* 5.4. Additional information

Do not inhale explosion and combustion gases. Move undamaged containers from immediate hazard area if it can be done safely. 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. Remove persons to safety.

Protective equipment:

Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2. For emergency responders

Personal protection equipment:

Use personal protection equipment.

* 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 (e.g. 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:
No special fire protection measures are necessary.

Environmental precautions:
See section 8.

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 in a cool, well-ventilated place.

Requirements for storage rooms and vessels:
Suitable container/equipment material: Floors should be impervious, resistant to liquids and easy to clean. Shafts and sewers must be protected from entry of the product.
Keep/Store only in original container.

Hints on storage assembly:
not required

Storage class: 10 – Combustible liquids that cannot be assigned to any of the above storage classes

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

Limit value type (country of origin)	**Substance name**	**① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark**
DFG (DE)	Dec-1-ene, dimers, hydrogenated CAS No.: 68649-11-6	① 5 mg/m³ ② 20 mg/m³ ⑤ (alveolengängige Fraktion)
CH	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³) ⑤ (kann über die Haut aufgenommen werden)
BE	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7.2 mg/m³) ② 10 ppm (36 mg/m³)
CZ	methyl acrylate CAS No.: 96-33-3	① 5.68 ppm (20 mg/m³) ② 11.36 ppm (40 mg/m³)
PL	methyl acrylate CAS No.: 96-33-3	① 14 mg/m³ ② 28 mg/m³
NO	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³) ⑤ (kan absorberes gjennom huden)

Limit value type (country of origin)	**Substance name**	**① long-term occupational exposure limit value** **② short-term occupational exposure limit value** **③ Instantaneous value** **④ Monitoring and observation processes** **⑤ Remark**
TRGS 900 (DE)	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7.1 mg/m³) ② 4 ppm (14.2 mg/m³) ⑤ (kann über die Haut aufgenommen werden)
IE	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³) ⑤ (may be absorbed through the skin)
FI	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7 mg/m³) ② 5 ppm (18 mg/m³) ⑤ (kan absorberas genom huden)
LT	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
SE	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
SK	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
IOELV (EU)	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
DK	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7 mg/m³) ② 4 ppm (14 mg/m³)
BG	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
MY	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7 mg/m³) ⑤ (resapan melalui kulit hendaklah diambil kira)
MAK (AT)	methyl acrylate CAS No.: 96-33-3	② 10 ppm (36 mg/m³) ⑤ (max. 8x5 min./Schicht, Momentanwert, kann über die Haut aufgenommen werden)
NL	methyl acrylate CAS No.: 96-33-3	① 18 mg/m³ ② 36 mg/m³
RO	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
EE	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
Alberta (CA)	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7 mg/m³)
LV	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
ES	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7.2 mg/m³) ⑤ (puede ser absorbido a través dérmica), (Sen)
MAK (AT)	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ⑤ (kann über die Haut aufgenommen werden)
BC (CA)	methyl acrylate CAS No.: 96-33-3	① 2 ppm ⑤ (may be absorbed through the skin)
VRC (FR)	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
JP	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7 mg/m³)
SI	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
TW	methyl acrylate CAS No.: 96-33-3	① 10 ppm (35 mg/m³) ⑤ (必須預計到從皮膚吸入)
KR	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7 mg/m³) ⑤ (피부를 통한 흡수를 예상해야 한다)
WEL (GB)	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
IS	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
CN	methyl acrylate CAS No.: 96-33-3	① 20 mg/m³
HU	methyl acrylate CAS No.: 96-33-3	① 18 mg/m³ ② 36 mg/m³
RU	methyl acrylate CAS No.: 96-33-3	① 5 mg/m³ ③ 15 mg/m³
GR	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
HR	methyl acrylate CAS No.: 96-33-3	① 5 ppm (18 mg/m³) ② 10 ppm (36 mg/m³)
OSHA (US)	methyl acrylate CAS No.: 96-33-3	① 10 ppm (35 mg/m³) ⑤ (may be absorbed through the skin)
NIOSH (US)	methyl acrylate CAS No.: 96-33-3	① 10 ppm (35 mg/m³) ⑤ (may be absorbed through the skin)
ACGIH (US)	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7 mg/m³) ⑤ (may be absorbed through the skin)
Québec (CA)	methyl acrylate CAS No.: 96-33-3	① 2 ppm (7 mg/m³)

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
methyl acrylate CAS No.: 96-33-3	18 mg/m³	① DNEL worker ② DNEL acute inhalative (local)

*
8.2. Exposure controls

8.2.1. Appropriate engineering controls
See section 7. No additional measures necessary.

8.2.2. Personal protection equipment

Eye/face protection:
During transfer: Eye glasses with side protection
Wear eye/face protection. DIN EN 166

Skin protection:
Hand protection
Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride), CR (polychloroprene, chloroprene rubber)
Thickness of the glove material: >= 0,4 mm
Breakthrough time (maximum wearing 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.

8.2.3. Environmental exposure controls
See section 7. No additional measures necessary.

8.3. Additional information
Mineral oil mist limits:
OSHA PEL - value 5 mg / m³, ACGIH STEL - value of 10 mg / m³

SECTION 9: Physical and chemical properties

*

9.1. Information on basic physical and chemical properties

Appearance
Physical state: Liquid **Colour:** red
Odour: characteristic

Safety relevant basis data

parameter		at °C	Method	Remark
pH	*not determined*			
Melting point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	*not determined*			
Decomposition temperature (°C):	*not determined*			
Flash point	188 °C			
Evaporation rate	*not determined*			
Ignition temperature in °C	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Relative density	829 kg/m³	20 °C		
Bulk density	*not determined*			
Water solubility	*not determined*			
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	21.8 mm²/s	40 °C		

9.2. Other information
No data available

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
To avoid thermal decomposition do not overheat.

* **10.5. Incompatible materials**
Materials to avoid: Acid, Reducing agent

* **10.6. Hazardous decomposition products**
Hazardous combustion products: Carbon dioxide Carbon monoxide Nitrogen oxides (NOx)

SECTION 11: Toxicological information

* **11.1. Information on toxicological effects**

CAS No.	Substance name	Toxicological information
124-28-7	N,N-Dimethyl-N-octadecylamine	**LD_{50} oral:** 1,000 – 2,118 mg/kg

Acute oral toxicity:
No information available for acute dermal and inhalative toxicity.

Acute dermal toxicity:
No information available for acute dermal and inhalative toxicity.

Acute inhalation toxicity:
Harmful if inhaled.

Skin corrosion/irritation:
No irritant effect. Frequently or prolonged contact with skin may cause dermal irritation.

Serious eye damage/irritation:
No irritant effect.

Respiratory or skin sensitisation:
No sensitizing effects known.

Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.

Carcinogenicity:
No indication of human carcinogenicity.

Reproductive toxicity:
No indications of human reproductive toxicity exist.

SECTION 12: Ecological information

* **12.1. Toxicity**

CAS No.	Substance name	Toxicological information
124-28-7	N,N-Dimethyl-N-octadecylamine	**LC_{50}:** 0.18 – 1.13 mg/l 4 d **EC_{50}:** 0.058 – 0.926 mg/l 2 d **EC_{50}:** 0.0099 – 0.0268 mg/l 3 d

Assessment/classification:
The product has not been tested.

* **12.2. Persistence and degradability**
No data available

* **12.3. Bioaccumulative potential**

CAS No.	Substance name	Log K_{OC}	Bioconcentration factor (BCF)
124-28-7	N,N-Dimethyl-N-octadecylamine	1.3	

* **12.4. Mobility in soil**
No information available.

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

CAS No.	Substance name	Results of PBT and vPvB assessment
96-33-3	methyl acrylate	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.
124-28-7	N,N-Dimethyl-N-octadecylamine	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

* ### 12.6. 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

Waste code packaging:

Remark:

Dispose of waste according to applicable legislation.

Waste treatment options

Appropriate disposal / Product:

Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:

Non-contaminated packages may be recycled.

* ### 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

No dangerous good in sense of these transport regulations.

14.1. UN-No.

not relevant

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

not relevant

* ### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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

No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

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

Störfallverordnung

for substances contained in the product:

E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Technische Anleitung Luft (TA-Luft)

Remark:

To follow: 5.2.5.

Water hazard class (WGK)

WGK:

2 - deutlich wassergefährdend

Source:

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

Technische Regeln für Gefahrstoffe

TRGS 510
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Berufsgenossenschaftliche Vorschriften (BGV)

Berufsgenossenschaftliche Informationen (BGI) 868
Berufsgenossenschaftliche Regeln (BGR) 189, 190, 192, 195

Other regulations, restrictions and prohibition regulations

Altöl-Verordnung (AltölV)

[DK] National regulations

Other regulations, restrictions and prohibition regulations

Lister over stoffer og processer, der anses for at være kræftfremkaldende

[FR] National regulations

Other regulations, restrictions and prohibition regulations

Tableaux de maladies professionnelles
Nomenclature des installations classées pour la protection de l‘environnement

[NL] National regulations

Other regulations, restrictions and prohibition regulations

Lijst van kankerverwekkende, mutagene, en voor de voortplanting giftige stoffen SZW
Algemeene beoordelingsmethodiek Water (ABM)
Nederlandse emissierichtlijn (NeR)

[CH] National regulations

Other regulations, restrictions and prohibition regulations

Mengenschwelle (Schweiz - StFV)
Gefahrencode
Brandverhütung, BVD (Schweiz)

15.2. Chemical Safety Assessment

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

15.3. Additional information

No data available

SECTION 16: Other information

*

16.1. Indication of changes

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
3.2.	Mixtures
4.1.	Description of first aid measures
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
5.4.	Additional information
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
8.1.	Control parameters
8.2.	Exposure controls
9.1.	Information on basic physical and chemical properties
10.1.	Reactivity
10.5.	Incompatible materials
10.6.	Hazardous decomposition products
11.1.	Information on toxicological effects
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.	Other adverse effects
13.1.	Waste treatment methods
13.2.	Additional information
14.7.	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes
16.5.	Relevant R-, H- and EUH-phrases (Number and full text)

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

16.3. Key literature references and sources for data

67/548/EEC - Dangerous Substances Directive
1999/45/EEC - Dangerous Preparations Directive
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]

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (inhalative) *(Acute Tox. 4)*	H332: Harmful if inhaled.	

*

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

Hazard statements	
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure. (...)
H400	Very toxic to aquatic life.
H410	Very 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