

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 12.05.2015

Version number 2

Revision: 11.04.2014

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

#### 1.1 Product identifier

Trade name **RENITHERM TOP COAT Komp.A RAL 9022**  
 Artikel-Nr.: **RE-TC.19022.A**

Article number: 407910 audax

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

No further relevant information available.

Application of the substance / the mixture Coating

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

##### Manufacturer/Supplier:

AUDAX-Keck GmbH  
 Weiherstr. 10  
 75365 Calw / Germany

Tel.: +49.7051.1625.0  
 Fax: +49.7051.1625.50

INFO: GL / R&D

Tel.: +49.7051.1625.0  
 Fax: +49.7051.1625.50  
 info@audax.de

SDB/-MSDS, e-mail:

#### 1.4 Emergency telephone number:

During normal opening times:

Responsible Department: GL / R&D

Tel.: 004970511625 0 Fax: 004970511625 50

poisoning information center Germany: daily 24h

Berlin 030-19240

Bonn 0228-19240

Erfurt 0361-730730

Göttingen 0551-19240

Freiburg 0761-19240

Homburg/Saar 06841 - 19240

Mainz 06131 - 19 240

München 089-19240

Nürnberg 0911-398 2451

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

##### Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R20/21: Harmful by inhalation and in contact with skin.



Xi; Irritant

R38: Irritating to skin.



Xi; Sensitising

R43: May cause sensitisation by skin contact.

R10-52/53: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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• **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

• **Classification system:**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

• **2.2 Label elements**

• **Labelling according to EU guidelines:**

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

• **Code letter and hazard designation of product:**

Xn Harmful

• **Hazard-determining components of labelling:**

Polymer (acrylate)  
 xylene, mixed isomers

• **Risk phrases:**

- 10 Flammable.
- 20/21 Harmful by inhalation and in contact with skin.
- 38 Irritating to skin.
- 43 May cause sensitisation by skin contact.
- 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

• **Safety phrases:**

- 9 Keep container in a well-ventilated place.
- 23 Do not breathe gas/fumes/vapour/spray.
- 25 Avoid contact with eyes.
- 36/37 Wear suitable protective clothing and gloves.
- 51 Use only in well-ventilated areas.
- 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

• **2.3 Other hazards**

• **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

• **3.2 Chemical characterization: Mixtures**

• **Description:** based on hydroxylic groups containing acrylic resin, pigmented

• **Dangerous components:**

CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9 Reg.nr.: 01-2119488216-32 01-2119486136-34 01-2119555267-33	xylene, mixed isomers Xn R20/21; Xi R38 R10 Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	20-<25%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate R10 Flam. Liq. 3, H226	2.5-4.99%

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CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4 Reg.nr.: 01-2119489370-35	ethylbenzene Xn R20; F R11 Flam. Liq. 2, H225; Acute Tox. 4, H332	1.0-2.49%
CAS: 64742-95-6 EINECS: 265-199-0 Index number: 650-001-02-5 Reg.nr.: 01-2119455851-35	Solvent naphtha (petroleum), light arom. Xn R65; Xi R37; N R51/53 R10-66-67 Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H335-H336	0.5-0.99%
EC number: 915-687-0 Reg.nr.: 01-2119491304-40	Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate Xi R43; N R50/53 Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	0.1-0.49%
CAS: 64742-94-5 EINECS: 265-198-5 Index number: 649-424-00-3	Solvent naphtha (petroleum), heavy arom. Xn R65; N R51/53 R66-67 Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336	0.1-0.49%
CAS: 68647-95-0	Fatty acids, C18-unsatd., dimers, compds. with coco alkylamines Xi R38; Xi R43 R52/53 Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 3, H412	0.1-0.49%

### SVHC

Substances of very high concern (SVHC) according to REACH, Article 57

- NONE

### Additional information

CAS: 64742-95-6 nota P is valid.

For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

Take affected persons out of danger area and instruct to lie down.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### After inhalation

Supply fresh air and call for doctor for safety reasons.

In case of unconsciousness bring patient into stable side position for transport.

After skin contact Instantly wash with water and soap and rinse thoroughly.

After eye contact Rinse opened eye for several minutes under running water.

#### After swallowing

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; instantly call for medical help.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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#### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
  - **Suitable extinguishing agents**  
CO<sub>2</sub>, sand, extinguishing powder. Do not use water.  
Alcohol-resistant foam
  - **For safety reasons unsuitable extinguishing agents**  
Water.  
Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**  
Can be released in case of fire  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide (CO)
- **5.3 Advice for firefighters**
  - **Protective equipment:**  
Do not inhale explosion gases or combustion gases.  
Put on breathing apparatus.
  - **Additional information**  
Cool endangered containers with water spray jet.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Collect contaminated fire fighting water separately. It must not enter drains.

#### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Keep away from ignition sources  
Wear protective clothing.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or water bodies.  
Inform respective authorities in case product reaches water or sewage system.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

#### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Keep containers tightly sealed.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
  - **Storage**
  - **Requirements to be met by storerooms and containers:** No special requirements.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:** Keep container tightly sealed.

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• **Storage class**

LGK VCI/D

3

• **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

• **Additional information about design of technical systems:** No further data; see item 7.

• **8.1 Control parameters**

• **Components with critical values that require monitoring at the workplace:**

**1330-20-7 xylene, mixed isomers**

WEL (Great Britain) Short-term value: 441 mg/m<sup>3</sup>, 100 ppm  
 Long-term value: 220 mg/m<sup>3</sup>, 50 ppm  
 Sk; BMGV

IOELV (European Union) Short-term value: 442 mg/m<sup>3</sup>, 100 ppm  
 Long-term value: 221 mg/m<sup>3</sup>, 50 ppm

**108-65-6 2-methoxy-1-methylethyl acetate**

WEL (Great Britain) Short-term value: 548 mg/m<sup>3</sup>, 100 ppm  
 Long-term value: 274 mg/m<sup>3</sup>, 50 ppm  
 Sk

IOELV (European Union) Short-term value: 550 mg/m<sup>3</sup>, 100 ppm  
 Long-term value: 275 mg/m<sup>3</sup>, 50 ppm

**100-41-4 ethylbenzene**

WEL (Great Britain) Short-term value: 552 mg/m<sup>3</sup>, 125 ppm  
 Long-term value: 441 mg/m<sup>3</sup>, 100 ppm  
 Sk

IOELV (European Union) Short-term value: 884 mg/m<sup>3</sup>, 200 ppm  
 Long-term value: 442 mg/m<sup>3</sup>, 100 ppm

• **DNELs**

**1330-20-7 xylene, mixed isomers**

Oral DNEL 1.6 mg/kg bw/d (consumer long time)

Dermal DNEL 180 mg/kg bw/d (worker long time)

108 mg/kg bw/d (consumer long time)

Inhalative DNEL 289 mg/m<sup>3</sup> (worker long time)

14.8 mg/m<sup>3</sup> (consumer long time)

174 mg/m<sup>3</sup> (consumer short time)

**108-65-6 2-methoxy-1-methylethyl acetate**

Oral DNEL 1.67 mg/kg bw/d (consumer long time)

Dermal DNEL 153 mg/kg bw/d (worker long time)

55 mg/kg bw/d (consumer long time)

Inhalative DNEL 275 mg/m<sup>3</sup> (worker long time)

33 mg/m<sup>3</sup> (consumer long time)

**100-41-4 ethylbenzene**

Dermal DNEL 180 mg/kg bw/d (worker long time)

108 mg/kg bw/d (consumer long time)

Inhalative DNEL 77 mg/m<sup>3</sup> (worker long time)

289 mg/m<sup>3</sup> (worker short time)

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		174 mg/m <sup>3</sup> (consumer short time)
<b>Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate</b>		
Oral	DNEL	1.25 mg/kg bw/d (consumer long time) 1.25 mg/kg bw/d (consumer short time)
Dermal	DNEL	2.5 mg/kg bw/d (worker long time) 2.5 mg/kg bw/d (worker short time) 1.25 mg/kg bw/d (consumer long time) 1.25 mg/kg bw/d (consumer short time)
Inhalative	DNEL	2.35 mg/m <sup>3</sup> (worker long time) 2.35 mg/m <sup>3</sup> (worker short time) 0.58 mg/m <sup>3</sup> (consumer long time) 0.58 mg/m <sup>3</sup> (consumer short time)

• **PNECs**

**1330-20-7 xylene, mixed isomers**

PNEC	12.46 mg/L (sediment fresh water) 12.46 mg/L (sediment sea water) 6.58 mg/L (sewage) 0.327 mg/L (sea water) 0.327 mg/L (fresh water)
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**108-65-6 2-methoxy-1-methylethyl acetate**

PNEC	3.29 mg/L (sediment fresh water) 0.329 mg/L (sediment sea water) 0.635 mg/L (fresh water)
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**Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate**

PNEC	1.05 mg/L (sediment fresh water) 0.11 mg/L (sediment sea water) 1 mg/L (sewage) 0.00022 mg/L (sea water) 0.0022 mg/L (fresh water)
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• **Ingredients with biological limit values:**

**1330-20-7 xylene, mixed isomers**

BMGV (Great Britain)	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid
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• **Additional information:** The lists that were valid during the compilation were used as basis.

• **8.2 Exposure controls**

• **Personal protective equipment**

• **General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.

Keep away from foodstuffs, beverages and food.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

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**Breathing equipment:**

Only during spraying without adequate removal by suction.

**Protection of hands:**

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

To avoid skin problems reduce the wearing of gloves to the required minimum.

Avoid direct contact with the chemical/ the product/ the preparation by organizational measures.

**Material of gloves**

Fluorocarbon rubber (Viton)

Recommended thickness of the material:

≥ 0,6 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

Value for the permeation: Level ≥

6

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**

Safety glasses recommended during refilling.

\*

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

**Form:**

Fluid

**Colour:**

According to product specification

**Smell:**

Characteristic

**Odour threshold:**

Not determined.

**pH-value:**

Not applicable

**Change in condition**

**Melting point/Melting range:**

Not determined

**Boiling point/Boiling range:**

136 °C

**Flash point:**

30 °C

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• <b>Inflammability (solid, gaseous)</b>	Not applicable.
• <b>Ignition temperature:</b>	500 °C
• <b>Decomposition temperature:</b>	Not determined
• <b>Self-inflammability:</b>	Product is not selfigniting.
• <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive steam/air mixtures is possible.
• <b>Critical values for explosion:</b>	
Lower:	1.0 Vol %
Upper:	10.8 Vol %
• <b>Oxidizing properties</b>	Not applicable
• <b>Vapor pressure at 20 °C:</b>	5 hPa
• <b>Density at 20 °C</b>	1.35 g/cm <sup>3</sup>
• <b>Relative density</b>	Not determined.
• <b>Vapour density</b>	Not determined
• <b>Evaporation rate</b>	Not determined.
• <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix
• <b>Partition coefficient (n-octanol/water):</b>	Not determined
• <b>Viscosity:</b>	
dynamic at 20 °C:	420 mPas
kinematic:	Not determined.
• <b>Solvent content:</b>	
Organic solvents:	31.4 %
Water:	0.0 %
Solids content: (calculated)	68.0 %
• <b>9.2 Other information</b>	No further relevant information available.

\*

## SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** None

\*

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

• <b>LD/LC50 values that are relevant for classification:</b>		
<b>1330-20-7 xylene, mixed isomers</b>		
Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rbt)
Inhalative	LC50/4 h	>20 mg/L (rat)

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<b>108-65-6 2-methoxy-1-methylethyl acetate</b>		
Oral	LD50	8500 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (kan)
Inhalative	LC50/4 h	35.7 mg/L (rat)
<b>100-41-4 ethylbenzene</b>		
Oral	LD50	3500 mg/kg (rat)
Dermal	LD50	17800 mg/kg (rbt)

• **Primary irritant effect:**

• **on the skin:** Irritant for skin and mucous membranes.

• **on the eye:** No irritant effect.

• **Sensitization:** Sensitization possible by skin contact.

• **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

## SECTION 12: Ecological information

• **12.1 Toxicity**

• **Aquatic toxicity:**

<b>1330-20-7 xylene, mixed isomers</b>	
EC50/24h	10<x<100 mg/L (Daphnia magna)
LC50/48h	8.5 mg/L (Crustacea)
LC50/96h	1<x<10 mg/L (Piscis)
<b>108-65-6 2-methoxy-1-methylethyl acetate</b>	
EC0/72h	>1000 mg/L (Pseudokirchneriella subcapitata)
EC20/30min.	>1000 mg/L (Pseudomonas)
EC50/48h	>500 mg/L (Daphnia magna)
LC50/96h	100<x<1000 mg/L (Piscis)
<b>100-41-4 ethylbenzene</b>	
EC50/48h	2.97 mg/L (Daphnia magna)
LC50/96h	4.2 mg/L (Oncorhynchus mykiss)
	10<x<100 mg/L (Piscis)
<b>Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate</b>	
EC50/24h	20 mg/L (Daphnia magna)
EC50/72h	1.68 mg/L (Pseudokirchneriella subcapitata)
LC50/96h	7.9 mg/L (Oncorhynchus mykiss)
	0.97 mg/L (Leuciscus idus)
NOEC(21d)	1 mg/L (Daphnia magna)

• **12.2 Persistence and degradability** No further relevant information available.

• **12.3 Bioaccumulative potential** No further relevant information available.

• **12.4 Mobility in soil** No further relevant information available.

• **Ecotoxicological effects:**

• **Remark:** Harmful to fish

• **Additional ecological information:**

• **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water.

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*Do not allow product to reach ground water, water bodies or sewage system.*

*Danger to drinking water if even small quantities leak into soil.*

*Harmful to aquatic organisms*

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Recommendation**

*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*

*Hand over to disposers of hazardous waste.*

**European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

**14.1 UN-Number**

ADR > 450 L (litre) -/- IMDG > 30 L (litre):  
UN1263

**ADR, ADN, IMDG**

ADR (2.2.3.1.5) ≤ 450 L  
IMDG (2.3.2.5) ≤ 30 L :  
Void

**IATA**

UN1263

**14.2 UN proper shipping name**

ADR > 450 L (litre) -/- IMDG > 30 L (litre):  
PAINT

**ADR, ADN, IMDG**

ADR (2.2.3.1.5) ≤ 450 L  
IMDG (2.3.2.5) ≤ 30 L :  
Void

**IATA**

PAINT

**14.3 Transport hazard class(es)**

ADR > 450 L (litre) -/- IMDG > 30 L (litre):  
3 Flammable liquids.

**ADR, ADN, IMDG**

ADR (2.2.3.1.5) ≤ 450 L  
IMDG (2.3.2.5) ≤ 30 L :

**Class**

Void

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• **IATA**

• **Class** 3 Flammable liquids.  
• **Label** 3

• **14.4 Packing group** ADR > 450 L (litre) -/- IMDG > 30 L (litre):  
III

• **ADR, IMDG** ADR (2.2.3.1.5) ≤ 450 L  
IMDG (2.3.2.5) ≤ 30 L :  
Void

• **IATA** III

• **14.5 Environmental hazards:**

• **Marine pollutant:** No

• **14.6 Special precautions for user** Not applicable.

• **Segregation groups** N/A

• **14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

• **Transport/Additional information:**• **ADR**

• **Remarks:** Receptacles ≤ 450 litres:  
"transport acc. ADR 2.2.3.1.5"

• **IMDG**

• **Remarks:** Receptacles ≤ 30 litres:  
"transport acc. IMDG-code 2.3.2.5"  
Receptacles > 30 Liter: Ems-No. F-E,S-E

• **UN "Model Regulation":** -

\* **SECTION 15: Regulatory information**

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

• **National regulations**

• **Decree to be applied in case of technical fault:**

Critical quantity values according to the regulations on accidents should be adhered to.

• **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

• **Other regulations, limitations and prohibitive regulations**

• **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

• **VOC-EU (1999/13/EG):** 31.42 %

• **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

\* **SECTION 16: Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

(Contd. on page 12)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 12.05.2015

Version number 2

Revision: 11.04.2014

**Trade name** RENITHERM TOP COAT Komp.A RAL 9022  
**Artikel-Nr.:** RE-TC.19022.A

(Contd. of page 11)

### Relevant phrases

- H225 Highly flammable liquid and vapour.  
 H226 Flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H312 Harmful in contact with skin.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H332 Harmful if inhaled.  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.  
 H411 Toxic to aquatic life with long lasting effects.  
 H412 Harmful to aquatic life with long lasting effects.
- R10 Flammable.  
 R11 Highly flammable.  
 R20 Harmful by inhalation.  
 R20/21 Harmful by inhalation and in contact with skin.  
 R37 Irritating to respiratory system.  
 R38 Irritating to skin.  
 R43 May cause sensitisation by skin contact.  
 R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R65 Harmful: may cause lung damage if swallowed.  
 R66 Repeated exposure may cause skin dryness or cracking.  
 R67 Vapours may cause drowsiness and dizziness.

• **Department issuing data specification sheet:** Responsible Department: GL / R&D

### Abbreviations and acronyms:

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
 ICAO: International Civil Aviation Organization  
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 DNEL: Derived No-Effect Level (REACH)  
 PNEC: Predicted No-Effect Concentration (REACH)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 Flam. Liq. 2: Flammable liquids, Hazard Category 2  
 Flam. Liq. 3: Flammable liquids, Hazard Category 3  
 Acute Tox. 4: Acute toxicity, Hazard Category 4  
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
 Asp. Tox. 1: Aspiration hazard, Hazard Category 1  
 Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1  
 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1  
 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2  
 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

• **\* Data compared to the previous version altered.**

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 11.04.2014

Version number 3

Revision: 11.04.2014

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

#### 1.1 Product identifier

Trade name **RENITHERM TOP COAT, Komp. B**  
Artikel-Nr.: RE-TC.19001.B

Article number: 280400 audax

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

For use in do-it-yourself applications not suitable.

Application of the substance / the mixture Hardening agent/ Curing agent

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

##### Manufacturer/Supplier:

AUDAX-Keck GmbH  
 Weiherstr. 10  
 75365 Calw / Germany

Tel.: +49.7051.1625.0  
 Fax: +49.7051.1625.50

INFO: GL / R&D

Tel.: +49.7051.1625.0  
 Fax: +49.7051.1625.50  
 info@audax.de

SDB/-MSDS, e-mail:

#### 1.4 Emergency telephone number:

During normal opening times:

Responsible Department: GL / R&D

Tel.: 004970511625 0 Fax: 004970511625 50

poisoning information center Germany: daily 24h

Berlin 030-19240

Bonn 0228-19240

Erfurt 0361-730730

Göttingen 0551-19240

Freiburg 0761-19240

Homburg/Saar 06841 - 19240

Mainz 06131 - 19 240

München 089-19240

Nürnberg 0911-398 2451

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H336 May cause drowsiness or dizziness.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Sensitising

R43: May cause sensitisation by skin contact.

R10-67: Flammable. Vapours may cause drowsiness and dizziness.

#### Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Has a narcotizing effect.

#### Classification system:

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

(Contd. on page 2)

GB

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 11.04.2014

Version number 3

Revision: 11.04.2014

**Trade name** RENITHERM TOP COAT, Komp. B  
**Artikel-Nr.:** RE-TC.19001.B

(Contd. of page 1)

### 2.2 Label elements

#### Labelling according to EU guidelines:

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

#### Code letter and hazard designation of product:

Xi Irritant

#### Hazard-determining components of labelling:

Hexamethylene diisocyanate, oligomers

#### Risk phrases:

10 Flammable.

43 May cause sensitisation by skin contact.

67 Vapours may cause drowsiness and dizziness.

#### Safety phrases:

23 Do not breathe gas/fumes/vapour/spray.

24/25 Avoid contact with skin and eyes.

29 Do not empty into drains.

37 Wear suitable gloves.

51 Use only in well-ventilated areas.

60 This material and its container must be disposed of as hazardous waste.

#### Special labelling of certain preparations:

Contains isocyanates. See information supplied by the manufacturer

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

\*

## SECTION 3: Composition/information on ingredients

### 3.2 Chemical characterization: Mixtures

Description: Mixture consisting of the following components with harmless additives.

#### Dangerous components:

CAS: 28182-81-2 NLP: 500-060-2	Hexamethylene diisocyanate, oligomers Xi R43 Skin Sens. 1, H317	70-100%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29	n-butyl acetate R10-66-67 Flam. Liq. 3, H226; STOT SE 3, H336	20-<25%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1	hexamethylene diisocyanate T R23; Xn R42/43; Xi R36/37/38 Acute Tox. 3, H331; Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.1-0.49%

#### SVHC

Substances of very high concern (SVHC) according to REACH, Article 57

- NONE

Additional information For the wording of the listed risk phrases refer to section 16.

\*

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General information Take affected persons out of danger area and instruct to lie down.

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**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 11.04.2014

Version number 3

Revision: 11.04.2014

**Trade name** RENITHERM TOP COAT, Komp. B  
**Artikel-Nr.:** RE-TC.19001.B

(Contd. of page 2)

- **After inhalation**  
Supply fresh air and call for doctor for safety reasons.  
In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; instantly call for medical help.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, sand, extinguishing powder. Do not use water.  
Alcohol-resistant foam
- **For safety reasons unsuitable extinguishing agents**  
Water.  
Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**  
Can be released in case of fire  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide (CO)
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained breathing apparatus.  
Do not inhale explosion gases or combustion gases.
- **Additional information**  
Cool endangered containers with water spray jet.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Keep away from ignition sources  
Wear protective clothing.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or water bodies.  
Inform respective authorities in case product reaches water or sewage system.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

GB

(Contd. on page 4)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 11.04.2014

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Trade name **RENITHERM TOP COAT, Komp. B**  
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### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Keep containers tightly sealed.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**  
**Requirements to be met by storerooms and containers:** No special requirements.  
**Information about storage in one common storage facility:** Not required.  
**Further information about storage conditions:** Keep container tightly sealed.
- **Storage class**  
LGK VCI/D  
3
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

#### 8.1 Control parameters

- **Components with critical values that require monitoring at the workplace:**

##### 123-86-4 n-butyl acetate

WEL (Great Britain)	Short-term value: 966 mg/m <sup>3</sup> , 200 ppm
	Long-term value: 724 mg/m <sup>3</sup> , 150 ppm

##### 822-06-0 hexamethylene diisocyanate

WEL (Great Britain)	Short-term value: 0.07 mg/m <sup>3</sup>
	Long-term value: 0.02 mg/m <sup>3</sup>
	Sen; as -NCO

#### • DNELs

##### 123-86-4 n-butyl acetate

Inhalative	DNEL	
		480 mg/m <sup>3</sup> (worker long time)
		960 mg/m <sup>3</sup> (worker short time)
		102 mg/m <sup>3</sup> (consumer long time)
		860 mg/m <sup>3</sup> (consumer short time)

#### • PNECs

##### 123-86-4 n-butyl acetate

PNEC	0.981 mg/L (sediment fresh water)
	0.0981 mg/L (sediment sea water)
	35.6 mg/L (sewage)
	0.018 mg/L (sea water)
	0.18 mg/L (fresh water)

- **Additional information:** The lists that were valid during the compilation were used as basis.

#### 8.2 Exposure controls

##### • Personal protective equipment

##### • General protective and hygienic measures

- The usual precautionary measures should be adhered to in handling the chemicals.
- Instantly remove any soiled and impregnated garments.
- Wash hands during breaks and at the end of the work.

(Contd. on page 5)

GB



## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 11.04.2014

Version number 3

Revision: 11.04.2014

**Trade name** RENITHERM TOP COAT, Komp. B  
**Artikel-Nr.:** RE-TC.19001.B

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• **Breathing equipment:**



Only during spraying without adequate removal by suction.

• **Protection of hands:**



Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

To avoid skin problems reduce the wearing of gloves to the required minimum.

Avoid direct contact with the chemical/ the product/ the preparation by organizational measures.

• **Material of gloves**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Recommended thickness of the material:

≥ 0,6 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

• **Penetration time of glove material**

Value for the permeation: Level ≥

6

The determined penetration times according to EN 374 part III are not performed under practical conditions.

Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• **Eye protection:**



Safety glasses recommended during refilling.

## SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

**Form:**

Fluid

**Colour:**

According to product specification

• **Smell:**

Characteristic

• **Odour threshold:**

Not determined.

• **pH-value:**

Not applicable

• **Change in condition**

**Melting point/Melting range:**

Not determined

**Boiling point/Boiling range:**

124 °C

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GB

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 11.04.2014

Version number 3

Revision: 11.04.2014

**Trade name** RENITHERM TOP COAT, Komp. B  
**Artikel-Nr.:** RE-TC.19001.B

(Contd. of page 5)

• <b>Flash point:</b>	27 °C
• <b>Inflammability (solid, gaseous)</b>	Not applicable.
• <b>Ignition temperature:</b>	370 °C
• <b>Decomposition temperature:</b>	Not determined
• <b>Self-inflammability:</b>	Product is not selfigniting.
• <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive steam/air mixtures is possible.
• <b>Critical values for explosion:</b>	
Lower:	3.0 Vol %
Upper:	10.4 Vol %
• <b>Oxidizing properties</b>	Not applicable
• <b>Vapor pressure at 20 °C:</b>	13 hPa
• <b>Density at 20 °C</b>	1.07 g/cm <sup>3</sup>
• <b>Relative density</b>	Not determined.
• <b>Vapour density</b>	Not determined
• <b>Evaporation rate</b>	Not determined.
• <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix
• <b>Partition coefficient (n-octanol/water):</b>	Not determined
• <b>Viscosity:</b>	
dynamic:	Not determined.
kinematic at 20 °C:	50 s (DIN 53211/4)
• <b>Solvent content:</b>	
Organic solvents:	24.9 %
Water:	0.0 %
Solids content: (calculated)	74.8 %
• <b>9.2 Other information</b>	No further relevant information available.

## SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** None

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

• **LD/LC50 values that are relevant for classification:**

**123-86-4 n-butyl acetate**

Oral	LD50	14000 mg/kg (rat)
Dermal	LD50	>17000 mg/kg (kan)
Inhalative	LC50/4 h	>21 mg/L (rat)

(Contd. on page 7)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.04.2014

Version number 3

Revision: 11.04.2014

Trade name **RENITHERM TOP COAT, Komp. B**  
 Artikel-Nr.: **RE-TC.19001.B**

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**822-06-0 hexamethylene diisocyanate**

Oral	LD50	>700 mg/kg (rat)
Dermal	LD50	>500 mg/kg (kan)
Inhalative	LC50/4 h	0.15 mg/L (rat)

• **Primary irritant effect:**• **on the skin:** No irritant effect.• **on the eye:** No irritant effect.• **Sensitization:** Sensitization possible by skin contact.• **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Irritant

### SECTION 12: Ecological information

• **12.1 Toxicity**• **Aquatic toxicity:****123-86-4 n-butyl acetate**

EC50/48h	44 mg/L (Daphnia magna)
EC50/72h	675 mg/L (Pseudokirchneriella subcapitata)
LC50/96h	18 mg/L (Piscis)
NOEC(21d)	23 mg/L (Daphnia magna)

**822-06-0 hexamethylene diisocyanate**

EC0/24h	<0.33 mg/L (Daphnia magna)
---------	----------------------------

• **12.2 Persistence and degradability** No further relevant information available.• **12.3 Bioaccumulative potential** No further relevant information available.• **12.4 Mobility in soil** No further relevant information available.• **Additional ecological information:**• **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

• **12.5 Results of PBT and vPvB assessment**• **PBT:** Not applicable.• **vPvB:** Not applicable.• **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

• **13.1 Waste treatment methods**• **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Hand over to disposers of hazardous waste.

• **European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances

(Contd. on page 8)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 11.04.2014

Version number 3

Revision: 11.04.2014


**Trade name** RENITHERM TOP COAT, Komp. B  
**Artikel-Nr.:** RE-TC.19001.B

(Contd. of page 7)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

\*

### SECTION 14: Transport information

- |   |                             |
|---|-----------------------------|
| • <b>14.1 UN-Number</b>   | UN1263                      |
| • <b>ADR, IMDG, IATA</b>  |                             |
| • <b>14.2 UN proper shipping name</b>   | 1263 PAINT                  |
| • <b>ADR</b>  | PAINT                       |
| • <b>IMDG</b>   |                             |
| • <b>IATA</b>   | PAINT                       |
| • <b>14.3 Transport hazard class(es)</b>  |                             |
| • <b>ADR, IMDG, IATA</b>  |                             |
|      |                             |
| • <b>Class</b>  | 3 Flammable liquids.        |
| • <b>Label</b>  | 3                           |
| • <b>14.4 Packing group</b>   | III                         |
| • <b>ADR, IMDG</b>  | III                         |
| • <b>IATA</b>   | III                         |
| • <b>14.5 Environmental hazards:</b>  |                             |
| • <b>Marine pollutant:</b>  | No                          |
| • <b>14.6 Special precautions for user</b>  | Warning: Flammable liquids. |
| • <b>Kemler Number:</b>   | 30                          |
| • <b>EMS Number:</b>  | F-E, S-E                    |
| • <b>Segregation groups</b>   | N/A                         |
| • <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.             |
| • <b>Transport/Additional information:</b>  |                             |
| • <b>ADR</b>  |                             |
| • <b>Limited quantities (LQ)</b>  | 5L                          |
| • <b>Transport category</b>   | 3                           |
| • <b>Tunnel restriction code</b>  | D/E                         |
| • <b>Remarks:</b>   |                             |
| • <b>UN "Model Regulation":</b>   | UN1263, PAINT, 3, III       |

\*

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Decree to be applied in case of technical fault:**  
Critical quantity values according to the regulations on accidents should be adhered to.

(Contd. on page 9)

GB

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 11.04.2014

Version number 3

Revision: 11.04.2014

**Trade name** RENITHERM TOP COAT, Komp. B  
**Artikel-Nr.:** RE-TC.19001.B

(Contd. of page 8)

• **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

• **Other regulations, limitations and prohibitive regulations**

• **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

• **VOC-EU (1999/13/EG):** 24.90 %

• **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

\*

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Relevant phrases**

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

R10 Flammable.

R23 Toxic by inhalation.

R36/37/38 Irritating to eyes, respiratory system and skin.

R42/43 May cause sensitisation by inhalation and skin contact.

R43 May cause sensitisation by skin contact.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

• **Department issuing data specification sheet:** Responsible Department: GL / R&D

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

• **\* Data compared to the previous version altered.**

GB