

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 4 07153 AN000 epple 07153-neu  
Print date 25.05.2023 Revision date 25.05.2023  
Version 5.0 25.05.2023

EN  
Page 1 / 9

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

**1.1. Product identifier**

Article No. (manufacturer/supplier): 4 07153 AN000  
Trade name/designation epple 07153-neu  
Gießharz  
Komponente A  
UFI: J160-M02V-S001-4WW6

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

**Relevant identified uses**

Casting resin for casting electronic and other components.

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

**supplier (manufacturer/importer/downstream user/distributor)**

E. Epple & Co. GmbH  
Hertzstr. 8  
71083 Herrenberg

Telephone: +49 7032 / 9771-17  
Telefax: +49 7032 / 9771-60  
www.epple-chemie.de

**Department responsible for information:**

laboratory

E-mail (competent person)

labor@epple-chemie.de

**1.4. Emergency telephone number**

Information center against poisoning Bonn

+49 (0) 228 / 19 240 (Advice in German)

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Skin Sens. 1 / H317

Respiratory or skin sensitisation

May cause an allergic skin reaction.

**2.2. Label elements**

The product is classified and labelled according to EC directives or corresponding national laws.

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

**Hazard pictograms**



**Warning**

**Hazard statements**

H317

May cause an allergic skin reaction.

**Precautionary statements**

P261

Avoid breathing vapours.

P280

Wear protective gloves.

P302 + P352

IF ON SKIN: Wash with plenty of soap and water.

P333 + P313

If skin irritation or rash occurs: Get medical advice/attention.

P362 + P364

Take off contaminated clothing and wash it before reuse.

P501

Dispose of contents / container to a certified waste management company.

**Hazard components for labelling**

Fatty acids, tall oil compounds with oleylamine

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine

**Supplemental hazard information**

not applicable

**2.3. Other hazards**

No information available.

This product contains respirable quartz. In the present physical form (liquid/pasty) and during the processing of the product, no dust is generated, so inhalation is not to be expected. Classification and labeling with STOT RE 1 / H372 is therefore not necessary.

Depending on handling and use (e.g. grinding), the formation of airborne respirable crystalline silica is possible. Prolonged and/or intensive inhalation of respirable crystalline silicon dioxide can

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 4 07153 AN000 epple 07153-neu  
Print date 25.05.2023 Revision date 25.05.2023  
Version 5.0 25.05.2023

EN  
Page 2 / 9

cause dust lung disease (silicosis).

**SECTION 3: Composition/information on ingredients**

3.2. **Mixtures** \*

**Description** mixture of polyester polyols, filled

**Hazardous ingredients**

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

EC No. CAS No. Index No.	REACH No. Designation classification: // Remark	weight-%
238-878-4 14808-60-7	quartz STOT RE 1 H372 Substance with a common (EC) occupational exposure limit value.	19,9 - 24,9
604-612-4 147900-93-4	01-2119971821-33 Fatty acids, C18-unsaturated, trimers, compounds with oleylamine Acute Tox. 4 H302 / Skin Sens. 1B H317 / STOT RE 1 H372 / Aquatic Chronic 2 H411 Acute toxicity estimate (ATE): ATE (oral): 1570 mg/kg bw	0,1 - 0,9
288-315-1 85711-55-3	01-2119974148-28 Fatty acids, tall oil compounds with oleylamine Skin Sens. 1A H317	0,1 - 0,9

**Additional information**

Full text of classification: see section 16

**SECTION 4: First aid measures**

4.1. **Description of first aid measures**

**General information**

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

**In case of inhalation**

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

**Following skin contact**

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

**After eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

**Following ingestion**

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

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

In all cases of doubt, or when symptoms persist, seek medical advice.

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

First Aid, decontamination, treatment of symptoms.

**SECTION 5: Firefighting measures**

5.1. **Extinguishing media**

**Suitable extinguishing media**

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

**Unsuitable extinguishing media**

strong water jet

5.2. **Special hazards arising from the substance or mixture**

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 4 07153 AN000 epple 07153-neu  
Print date 25.05.2023 Revision date 25.05.2023  
Version 5.0 25.05.2023

EN  
Page 3 / 9

**5.3. Advice for firefighters**

Provide a conveniently located respiratory protective device.

**Additional information**

Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Ventilate affected area. Do not breathe vapours.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

**6.3. Methods and material for containment and cleaning up**

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

**6.4. Reference to other sections**

Observe protective provisions (see section 7 and 8).

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advices on safe handling**

Avoid contact with skin, eyes and clothes. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

**Hints on joint storage**

Keep away from strongly acidic and alkaline materials as well as oxidizers.

**Further information on storage conditions**

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 5 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

**7.3. Specific end use(s)**

Observe technical data sheet. Observe instructions for use.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limit values**

not applicable

**DNEL:**

Fatty acids, tall oil compounds with oleylamine

EC No. 288-315-1 / CAS No. 85711-55-3

DNEL long-term dermal (systemic), Workers: 0,024 mg/kg

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine

EC No. 604-612-4 / CAS No. 147900-93-4

DNEL long-term dermal (systemic), Workers: 0,024 mg/kg

**PNEC:**

Fatty acids, tall oil compounds with oleylamine

EC No. 288-315-1 / CAS No. 85711-55-3

PNEC Secondary Poisoning: 0,47 mg/kg

\*

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 4 07153 AN000 epple 07153-neu  
Print date 25.05.2023 Revision date 25.05.2023  
Version 5.0 25.05.2023

EN  
Page 4 / 9

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine

EC No. 604-612-4 / CAS No. 147900-93-4

PNEC aquatic, freshwater: 0,006 mg/L

PNEC aquatic, marine water: 0,0006 mg/L

PNEC sediment, freshwater: 2,46 mg/kg

PNEC sediment, marine water: 0,25 mg/kg

PNEC, soil: 0,28 mg/kg

PNEC Secondary Poisoning: 0,47 mg/kg

8.2. **Exposure controls** \*

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

**Personal protection equipment**

**Respiratory protection**

If the workplace limit values (AGW) are exceeded, a suitable breathing apparatus must be worn. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Use filter / combination filter according to EN 14387.

Suitable respiratory protection apparatus: ABEK-P2

**Hand protection**

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)

Thickness of the glove material > 0,4 mm ; Breakthrough time: > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

**Eye/face protection**

Wear eye glasses with side protection according to EN 166.

**Body protection**

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

**Protective measures**

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

**Environmental exposure controls**

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

**SECTION 9: Physical and chemical properties**

9.1. **Information on basic physical and chemical properties** \*

<b>Physical state:</b>	<b>Liquid</b>
<b>Appearance:</b>	<b>Liquid</b>
<b>Colour:</b>	<b>black</b>
<b>Odour:</b>	<b>characteristic</b>
<b>Odour threshold:</b>	<b>not applicable</b>
<b>Melting point/freezing point</b>	<b>-12 °C</b>
<b>Initial boiling point and boiling range:</b>	<b>not applicable</b>
<b>Flammability:</b>	<b>Combustible liquid.</b>
<b>Lower and upper explosion limit:</b>	
<b>Lower explosion limit:</b>	<b>not applicable</b>
<b>Upper explosion limit:</b>	<b>not applicable</b>
<b>Flash point:</b>	<b>286 °C</b>
<b>Auto-ignition temperature:</b>	<b>not applicable</b>
<b>Decomposition temperature:</b>	<b>not applicable</b>
<b>pH at 20 °C:</b>	<b>not relevant</b>
<b>Cinematic viscosity (40°C):</b>	<b>5200 mm<sup>2</sup>/s</b>
<b>Viscosity at 20 °C:</b>	<b>5 - 8 Pa*s</b>

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 4 07153 AN000 epple 07153-neu  
Print date 25.05.2023 Revision date 25.05.2023  
Version 5.0 25.05.2023

EN  
Page 5 / 9

**Solubility(ies):**  
**Water solubility at 20 °C:** insoluble  
**Partition coefficient: n-octanol/water:** see section 12  
**Vapour pressure at 20 °C:** not applicable  
**Density and/or relative density:**  
**Density at 20 °C:** 1,25 g/cm<sup>3</sup>  
**Relative vapour density:** not applicable  
**particle characteristics:** not applicable

9.2. **Other information** \*

**solvent content:**  
**Organic solvents:** 1 weight-%  
**Water:** 0 weight-%  
**Solvent separation test:** < 3 weight-% (ADR/RID)

**SECTION 10: Stability and reactivity**

10.1. **Reactivity**

No information available.

10.2. **Chemical stability**

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. **Possibility of hazardous reactions**

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. **Conditions to avoid**

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. **Incompatible materials**

not applicable

10.6. **Hazardous decomposition products**

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

**SECTION 11: Toxicological information**

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

**Acute toxicity**

Fatty acids, tall oil compounds with oleylamine  
oral, LD50, Rat: > 2000 mg/kg  
Method: OECD 423

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine  
oral, LD50, Rat: > 1570 mg/kg

**Skin corrosion/irritation; Serious eye damage/eye irritation**

Fatty acids, tall oil compounds with oleylamine  
eyes, Rabbit  
Method: OECD 405  
Skin:, EPISKIN human epidermis skin constructs: Evaluation no skin irritation  
Method: OECD 439

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine  
eyes, Bovine corneal opacity and permeability assay (BCOP)  
Method: OECD 437  
Skin:, EPISKIN human epidermis skin constructs: Evaluation no skin irritation  
Method: OECD 439

**Respiratory or skin sensitisation**

May cause an allergic skin reaction.

Fatty acids, tall oil compounds with oleylamine

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 4 07153 AN000 epple 07153-neu  
Print date 25.05.2023 Revision date 25.05.2023  
Version 5.0 25.05.2023

EN  
Page 6 / 9

Skin, Mouse Local Lymph Node assay (LLNA), Mouse: ; Evaluation May cause sensitization by skin contact.  
Method: OECD 429

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine  
Skin, Mouse Local Lymph Node assay (LLNA), Mouse: ; Evaluation May cause sensitization by skin contact.  
Method: OECD 429

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine  
genotoxicity; Evaluation negative  
Method: OECD 471 (Ames test).

**STOT-single exposure; STOT-repeated exposure**

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine  
STOT-repeated exposure, NOAEL:, Rat: 7,1 mg/L  
Method: OECD 422  
oral; gastrointestinal tract

**Aspiration hazard**

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

**Practical experience/human evidence**

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

**Overall assessment on CMR properties**

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

**Remark**

There is no information available on the preparation itself . The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and has not been classified.

11.2. **Information on other hazards**

**Endocrine disrupting properties**

No information available.

**SECTION 12: Ecological information**

Classification according to Regulation (EC) No 1272/2008 [CLP]  
Do not allow to enter into surface water or drains.

12.1. **Toxicity**

Fatty acids, tall oil compounds with oleylamine  
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): > 100 mg/L (96 h)  
Method: OECD 203  
Daphnia toxicity, EC50, Daphnia magna (Big water flea): 15,2 mg/L (48 h)  
Method: OECD 202  
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 7,43 mg/L (72 h)  
Method: OECD 201  
Fish toxicity, NOEC:, Leuciscus idus (golden orfe): 150 mg/L (48 h)  
Method: DIN 38412  
Bacterial toxicity:, EC50, Pseudomonas putida: > 400 mg/L (16 h)  
Method: DIN 38412 / part 8  
Bacterial toxicity:, EC50, Activated sludge: > 1000 mg/L (3 h)  
Method: OECD 209

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine  
Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): > 100 mg/L (96 h)  
Method: OECD 203  
Daphnia toxicity, EC50, Daphnia magna (Big water flea): > 100 mg/L (48 h)  
Method: OECD 202  
Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 7,89 mg/L (72 h)  
Method: OECD 201  
Bacteria toxicity, EC50:, Activated sludge: > 1000 mg/L (3 h)  
Method: OECD 209

**Long-term Ecotoxicity**

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 4 07153 AN000 epple 07153-neu  
Print date 25.05.2023 Revision date 25.05.2023  
Version 5.0 25.05.2023

EN  
Page 7 / 9

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine  
Daphnia toxicity, EC50:, Daphnia magna (Big water flea): > 100 mg/L (21 d)  
Method: OECD 211

**12.2. Persistence and degradability**

Fatty acids, tall oil compounds with oleylamine  
Biodegradation:: Evaluation Readily biodegradable  
Method: OECD 301

Fatty acids, C18-unsaturated, trimers, compounds with oleylamine  
Biodegradation:: Evaluation Not readily biodegradable (according to OECD criteria)  
Method: OECD 301

**12.3. Bioaccumulative potential**

Toxicological data are not available.

**Bioconcentration factor (BCF)**

Toxicological data are not available.

**12.4. Mobility in soil**

Toxicological data are not available.

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

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

**12.6. Endocrine disrupting properties**

No information available.

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Appropriate disposal / Product Recommendation**

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Observe in addition any national regulations!

**List of proposed waste codes/waste designations in accordance with EWC**

080409\* Waste adhesives and sealants containing organic solvents or other dangerous substances

\*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

**Appropriate disposal / Package**

**Dispose of packaging and contaminated filters at a official hazardous waste incinerator facility.**

Recommendation:

Waste codes / waste designations according to EWC / AVV: 15 01 10\*

Non-contaminated packages may be recycled.

**SECTION 14: Transport information**

**This mixture is not classified as dangerous according to international transport regulations (ADR/RID, IMDG, ICAO/IATA).**

**No dangerous good in sense of this transport regulation.**

**14.1. UN number or ID number**

not applicable

**14.2. UN proper shipping name**

**14.3. Transport hazard class(es)**

not applicable

**14.4. Packing group**

not applicable

**14.5. Environmental hazards**

\*

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 4 07153 AN000 epple 07153-neu  
Print date 25.05.2023 Revision date 25.05.2023  
Version 5.0 25.05.2023

EN  
Page 8 / 9

Land transport (ADR/RID) not applicable  
Marine pollutant not applicable

**14.6. Special precautions for user**

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

**Further information**

**Land transport (ADR/RID)**

Tunnel restriction code -

**Sea transport (IMDG)**

EmS-No. not applicable

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

No transport as bulk according IBC - Code.

**SECTION 15: Regulatory information**

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

**EU legislation**

**Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]**

VOC-value (in g/L): 11

**National regulations**

**Restrictions of occupation**

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

For professional use only. Product is not intended for consumer use.

**Substance/product listed in the following inventories:**

AICS no information  
DSL no information  
EHS no information  
IECSC no information  
KECI no information  
MITI no information  
NZLoC no information  
PICCS no information  
TCSI no information  
TSCA no information

**15.2. Chemical Safety Assessment**

**For the following substances of this mixture a chemical safety assessment has been carried out:**

EC No. CAS No.	Designation	REACH No.
604-612-4 147900-93-4	Fatty acids, C18-unsaturated, trimers, compounds with oleylamine	01-2119971821-33
288-315-1 85711-55-3	Fatty acids, tall oil compounds with oleylamine	01-2119974148-28

**SECTION 16: Other information** \*

**Full text of classification in section 3:**

STOT RE 1 / H372

STOT-repeated exposure

Causes damage to organs (or state all organs)



**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



Article No.: 4 07153 AN000 epple 07153-neu  
Print date 25.05.2023 Revision date 25.05.2023  
Version 5.0 25.05.2023

EN  
Page 9 / 9

Acute Tox. 4 / H302 Acute toxicity (oral)  
Skin Sens. 1B / H317 Respiratory or skin sensitisation  
Aquatic Chronic 2 / H411 Hazardous to the aquatic environment  
Skin Sens. 1A / H317 Respiratory or skin sensitisation

affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).  
Harmful if swallowed.  
May cause an allergic skin reaction.  
Toxic to aquatic life with long lasting effects.  
May cause an allergic skin reaction.

**Classification procedure**

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

Skin Sens. 1 Respiratory or skin sensitisation Calculation method.

**Abbreviations and acronyms**

ADR European Agreement concerning the International Carriage of Dangerous Goods by Road  
OEL Occupational Exposure Limit Value  
BLV Biological Limit Value  
CAS Chemical Abstracts Service  
CLP Classification, Labelling and Packaging  
CMR Carcinogenic, Mutagenic and Reprotoxic  
DIN German Institute for Standardization / German industrial standard  
DNEL Derived No-Effect Level  
EAKV European Waste Catalogue Directive  
EC Effective Concentration  
EC European Community  
EN European Standard  
IATA-DGR International Air Transport Association – Dangerous Goods Regulations  
IBC Code International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
ICAO-TI International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air  
IMDG Code International Maritime Code for Dangerous Goods  
ISO International Organization for Standardization  
LC Lethal Concentration  
LD Lethal Dose  
MARPOL Maritime Pollution: The International Convention for the Prevention of Pollution from Ships  
OECD Organisation for Economic Cooperation and Development  
PBT persistent, bioaccumulative, toxic  
PNEC Predicted No Effect Concentration  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals  
RID Regulations concerning the International Carriage of Dangerous Goods by Rail  
UN United Nations  
VOC Volatile Organic Compounds  
vPvB very persistent and very bioaccumulative

**Abbreviations and acronyms**

n.a. = not applicable

n.b. = not determined

**Further information**

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.

\* Data changed compared with the previous version