

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



Article No.: 4 07145 A0000 epple 07145
Print date 25.05.2023 Revision date 25.05.2023
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Article No. (manufacturer/supplier): 4 07145 A0000
Trade name/designation epple 07145
Cast resin
Component A
UFI: 5U50-K0Q3-5002-T7R2

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 Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.

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

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves.
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

1,6-hexanediol diglycidyl ether
Bisphenol-F-epichlorohydrin resin with molecular weight <= 700
bis-[4-(2,3-epoxipropoxy)phenyl]propane

Supplemental hazard information

EUH205 Contains epoxy constituents. May produce an allergic reaction.

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2.3. **Other hazards**

No information available.

SECTION 3: Composition/information on ingredients

3.2. **Mixtures** *

Description EP-resin on bisphenol A-EP base filled

Hazardous ingredients

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

EC No. CAS No. Index No.	REACH No. Designation classification: // Remark	weight-%
216-823-5 1675-54-3 603-073-00-2	01-2119456619-26 bis-[4-(2,3-epoxipropoxy)phenyl]propane Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Skin Sens. 1 H317 / Aquatic Chronic 2 H411 Specific concentration limit (SCL): Eye Irrit. 2 H319 >= 5 / Skin Irrit. 2 H315 >= 5	24,9 - 49,9
240-260-4 16096-31-4	01-2119463471-41 1,6-hexanediol diglycidyl ether Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Skin Sens. 1 H317 / Aquatic Chronic 3 H412	19,9 - 24,9
500-006-8 9003-36-5	01-2119454392-40 Bisphenol-F-epichlorohydrin resin with molecular weight <= 700 Skin Irrit. 2 H315 / Skin Sens. 1 H317 / Aquatic Chronic 2 H411	19,9 - 24,9

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.

5.3. Advice for firefighters

Provide a conveniently located respiratory protective device. Do not allow water used to extinguish fire to enter drains, ground or waterways. Cool closed containers that are near the source of the fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition. 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. Follow the legal protection and safety regulations.

Further information

Vapours are heavier than air. Vapours form explosive mixtures with air.

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. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".

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:

bis-[4-(2,3-epoxipropoxy)phenyl]propane

Index No. 603-073-00-2 / EC No. 216-823-5 / CAS No. 1675-54-3

DNEL acute dermal, short-term (systemic), Workers: 8,3 mg/kg bw/day

DNEL long-term dermal (systemic), Workers: 8,3 mg/kg bw/day

DNEL acute inhalative (systemic), Workers: 12,3 mg/m³

DNEL long-term inhalative (systemic), Workers: 12,3 mg/m³

1,6-hexanediol diglycidyl ether

EC No. 240-260-4 / CAS No. 16096-31-4

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DNEL acute dermal, short-term (local), Workers: 0,0226 mg/cm²
DNEL long-term dermal (systemic), Workers: 2,8 mg/kg bw/day
DNEL long-term inhalative (systemic), Workers: 0,44 mg/m³

Bisphenol-F-epichlorohydrin resin with molecular weight <= 700
EC No. 500-006-8 / CAS No. 9003-36-5

DNEL acute dermal, short-term (local), Workers: 8,3 µg/cm³
DNEL long-term dermal (systemic), Workers: 104,15 mg/kg bw/day
DNEL long-term inhalative (systemic), Workers: 29,39 mg/m³

PNEC:

bis-[4-(2,3-epoxipropoxy)phenyl]propane

Index No. 603-073-00-2 / EC No. 216-823-5 / CAS No. 1675-54-3

PNEC aquatic, freshwater: 6 µg/L
PNEC aquatic, marine water: 1 µg/L
PNEC aquatic, intermittent release: 0,013 mg/L
PNEC sediment, freshwater: 0,996 mg/kg dw
PNEC sediment, marine water: 0,1 mg/kg dw
PNEC, soil: 0,196 mg/kg dw
PNEC sewage treatment plant (STP): 10 mg/L

1,6-hexanediol diglycidyl ether

EC No. 240-260-4 / CAS No. 16096-31-4

PNEC aquatic, freshwater: 0,0115 mg/L
PNEC aquatic, marine water: 0,0011 mg/L
PNEC aquatic, intermittent release: 0,115 mg/L
PNEC sediment, freshwater: 0,283 mg/kg
PNEC sediment, marine water: 0,0283 mg/kg
PNEC, soil: 0,223 mg/kg
PNEC sewage treatment plant (STP): 1 mg/L

Bisphenol-F-epichlorohydrin resin with molecular weight <= 700

EC No. 500-006-8 / CAS No. 9003-36-5

PNEC aquatic, freshwater: 0,003 mg/L
PNEC aquatic, marine water: 0,0003 mg/L
PNEC aquatic, intermittent release: 0,0254 mg/L
PNEC sediment, freshwater: 0,294 mg/kg bw/day
PNEC sediment, marine water: 0,0294 mg/kg bw/day
PNEC, soil: 0,237 mg/kg bw/day
PNEC sewage treatment plant (STP): 10 mg/L

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

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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 *

Physical state:	Liquid
Appearance:	Liquid
Colour:	red
Odour:	characteristic
Odour threshold:	not applicable
Melting point/freezing point:	-66 °C
Initial boiling point and boiling range:	not applicable
Flammability:	not applicable
Lower and upper explosion limit:	
Lower explosion limit:	not applicable
Upper explosion limit:	not applicable
Flash point:	not applicable
Auto-ignition temperature:	not applicable
Decomposition temperature:	not applicable
pH at 20 °C:	not relevant
Cinematic viscosity (40°C):	565,22 mm ² /s
Viscosity at 20 °C:	0,6 - 0,7 Pa*s
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:	1,15 g/cm ³
Relative vapour density:	not applicable
particle characteristics:	not applicable

9.2. Other information

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

Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. Incompatible materials

not applicable

10.6. Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

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

Acute toxicity

bis-[4-(2,3-epoxipropoxy)phenyl]propane

oral, LD50, Rat: > 2000 mg/kg

dermal, LD50, Rat: > 2000 mg/kg

Method: OECD 402

dermal, LD50, Rabbit: > 2000 mg/kg

1,6-hexanediol diglycidyl ether

oral, LD50, Rat: 3741 mg/kg

dermal, LD50, Rat: > 2000 mg/kg

inhalative (vapours), LC50, Rat: > 0,035 mg/L (4 h)

Bisphenol-F-epichlorohydrin resin with molecular weight <= 700

oral, LD50, Rat: > 2000 mg/kg

dermal, LD50, Rabbit: > 2000 mg/kg

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes skin irritation.

Causes serious eye irritation.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

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

STOT-single exposure; STOT-repeated exposure

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

Aspiration hazard

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

Practical experience/human evidence

Based on the properties of the epoxy constituents and considering toxicological data on similar preparations, this preparation may be a skin sensitiser and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may result in irritations and sensitizations, possibly due to a cross-over sensitization with other epoxy compounds. Skin contact with the preparation and exposure to spray mist and vapour should be avoided.

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.

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

bis-[4-(2,3-epoxipropoxy)phenyl]propane

Fish toxicity, LC50: 1,3 mg/L (96 h)

Method: OECD 203

Daphnia toxicity, EC50: 2,1 mg/L (48 h)

Method: OECD 202

1,6-hexanediol diglycidyl ether

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 30 mg/L (96 h)

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 47 mg/L (48 h)

Bisphenol-F-epichlorohydrin resin with molecular weight <= 700

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Fish toxicity, LC50: 2,54 mg/L (96 h)
Daphnia toxicity, EC50: 2,55 mg/L (48 h)
Algae toxicity, EC50: > 1000 mg/L (72 h)

Long-term Ecotoxicity

Toxic to aquatic life with long lasting effects.

bis-[4-(2,3-epoxipropoxy)phenyl]propane
Daphnia toxicity, NOEC: 0,3 mg/L (21 d)
Method: OECD 211

12.2. Persistence and degradability

bis-[4-(2,3-epoxipropoxy)phenyl]propane
Biodegradation: 5 % (28 d); Evaluation Not readily biodegradable (according to OECD criteria)
Method: OECD 301F
Biodegradation: 6 - 12 % (28 d); Evaluation Not readily biodegradable (according to OECD criteria)
Method: OECD 301B
1,6-hexanediol diglycidyl ether
: 47 % (28 d); Evaluation Not readily biodegradable (according to OECD criteria)
Method: OECD 301D

12.3. Bioaccumulative potential

bis-[4-(2,3-epoxipropoxy)phenyl]propane
Partition coefficient: n-octanol/water: 2,64 - 3,78
1,6-hexanediol diglycidyl ether
Partition coefficient: n-octanol/water: 0,822
Method: OECD 107
Bisphenol-F-epichlorohydrin resin with molecular weight <= 700
Partition coefficient: n-octanol/water: 3,3

Bioconcentration factor (BCF)

bis-[4-(2,3-epoxipropoxy)phenyl]propane
Bioconcentration factor (BCF): 3 - 31
1,6-hexanediol diglycidyl ether
Bioconcentration factor (BCF): < 100

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:

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Waste codes / waste designations according to EWC / AVV: 15 01 10*
Non-contaminated packages may be recycled.

SECTION 14: Transport information

- 14.1. **UN number or ID number**
UN 3082
- 14.2. **UN proper shipping name**
Land transport (ADR/RID): Environmentally hazardous substance, liquid, n.o.s.
(4,4'-methylene diphenyl diglycidyl ether)
Sea transport (IMDG): ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(4,4'-methylene diphenyl diglycidyl ether)
Air transport (ICAO-TI / IATA-DGR): Environmentally hazardous substance, liquid, n.o.s.
(4,4'-methylene diphenyl diglycidyl ether)
- 14.3. **Transport hazard class(es)**
9
- 14.4. **Packing group**
III
- 14.5. **Environmental hazards**
Land transport (ADR/RID) DANGEROUS FOR THE ENVIRONMENT
Marine pollutant p / 4,4'-methylene diphenyl diglycidyl ether
- 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 -
in packages <= 5 litres KEIN GUT DER KLASSE 9
- Sea transport (IMDG)**
EmS-No. F-A, S-F
in packages <= 5 litres NOT RESTRICTED 2.10.2.7
- Air transport (ICAO-TI / IATA-DGR)**
in packages <= 5 litres NOT RESTRICTED
- 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): 7
- 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.

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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 listet

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.
216-823-5 1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane	01-2119456619-26
240-260-4 16096-31-4	1,6-hexanediol diglycidyl ether	01-2119463471-41
500-006-8 9003-36-5	Bisphenol-F-epichlorohydrin resin with molecular weight <= 700	01-2119454392-40

SECTION 16: Other information *

Full text of classification in section 3:

Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment	Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3 / H412	Hazardous to the aquatic environment	Harmful to aquatic life with long lasting effects.

Classification procedure

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

Skin Irrit. 2	Skin corrosion/irritation	Calculation method.
Eye Irrit. 2	Serious eye damage/eye irritation	Calculation method.
Skin Sens. 1	Respiratory or skin sensitisation	Calculation method.
Aquatic Chronic 2	Hazardous to the aquatic environment	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

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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