

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.01.2022

Version number 7 (replaces version 6)


Revision: 31.01.2022


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

- 1.1 Product identifier
- Trade name: **KEMPERDUR HB Coating (B)**
- UFI: DMK6-90K1-K002-5GS7
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Application of the substance / the mixture: Identified use: intended for professional use only!
Coating
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier: KEMPER SYSTEM GmbH & Co. KG
Holländische Strasse 32-36
34246 Vellmar
Deutschland / Germany
Telefon: +49 (0)561 / 8295-0
Telefax: +49 (0)561 / 8295-5110
E-Mail: MSDS@KEMPER-SYSTEM.COM
- Further information obtainable from: research & development
- 1.4 Emergency telephone number: Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen
Langenbeckstraße 1; Gebäude 601; 55131 Mainz
Tel. Nr.: +49 (0)6131 / 19 24 0
Universitätsmedizin der Johannes Gutenberg-Universität Mainz

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
 - Acute Tox. 4 H332 Harmful if inhaled.
 - Skin Sens. 1 H317 May cause an allergic skin reaction.
 - STOT SE 3 H335 May cause respiratory irritation.
 - STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
 - Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
- Hazard pictograms


GHS07


GHS08
- Signal word: Warning
- Hazard-determining components of labelling:
 - Hexamethylene diisocyanate, oligomers
 - Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)
 - Hexamethylene diisocyanate, oligomers; Uretdion type
 - Isophorondiisocyanate homopolymer
 - 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
 - hexamethylene-di-isocyanate
- Hazard statements
 - H332 Harmful if inhaled.
 - H317 May cause an allergic skin reaction.
 - H335 May cause respiratory irritation.
 - H373 May cause damage to organs through prolonged or repeated exposure.
 - H412 Harmful to aquatic life with long lasting effects.
- Precautionary statements
 - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 - P280 Wear protective gloves.
 - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - P312 Call a POISON CENTER/doctor if you feel unwell.
 - P405 Store locked up.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- Additional information:
 - EUH204 Contains isocyanates. May produce an allergic reaction.
 - As from 24 August 2023 adequate training is required before industrial or professional use.
- 2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.

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- vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

- 3.2 Mixtures

- Description: Mixture: consisting of the following components.

- Dangerous components:

CAS: 28182-81-2 NLP: 500-060-2	Hexamethylene diisocyanate, oligomers Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 53880-05-0 EC number: 931-312-3	Isophorondiisocyanate homopolymer Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 28182-81-2 NLP: 500-060-2	Hexamethylene diisocyanate, oligomers; Uretdion type Acute Tox. 3, H331; Skin Sens. 1, H317; STOT SE 3, H335	≥12.5-<20%
CAS: 28182-81-2 NLP: 500-060-2	Hexamethylene diisocyanate Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	≥12.5-<20%
EC number: 919-446-0	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) Flam. Liq. 3, H226; STOT RE 1, H372; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336	≥2.5-<10%
EC number: 918-668-5	hydrocarbons, C9, aromatic Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H335-H336, EUH066	2.5-10%
CAS: 4098-71-9 EINECS: 223-861-6	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate Acute Tox. 1, H330; Resp. Sens. 1, H334; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Resp. Sens. 1; H334: C ≥ 0.5 % Skin Sens. 1; H317: C ≥ 0.5 %	≥0.1-<0.25%
CAS: 822-06-0 EINECS: 212-485-8	hexamethylene-di-isocyanate Acute Tox. 1, H330; Resp. Sens. 1, H334; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Resp. Sens. 1; H334: C ≥ 0.5 % Skin Sens. 1; H317: C ≥ 0.5 %	≥0.1-<0.5%

- Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- 4.1 Description of first aid measures

- General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Do not leave affected persons unattended.
Personal protection for the First Aider.

- After inhalation:

Take affected persons out of danger area and lay down.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.

- After skin contact:

Immediately wash with water and soap and rinse thoroughly.
Seek medical treatment in case of complaints.

- After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
Protect unharmed eye.

- After swallowing:

If symptoms persist consult doctor.

- 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:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.

- For safety reasons unsuitable extinguishing agents:

Water with full jet

- 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.
Nitrogen oxides (NO_x)
Carbon monoxide (CO)

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- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information** 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.
Avoid contact with skin and eyes
Ensure adequate ventilation
- **6.2 Environmental precautions:** Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
Prevent from spreading (e.g. by damming-in or oil barriers).
- **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
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 disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Store in dry conditions.
Protect from frost.
Keep container tightly sealed.
Recommended storage temperature: 5-30 °C
- **Storage class:** 10
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

OEL	Long-term value: 0.005 ppm
Sens	

822-06-0 hexamethylene-di-isocyanate

OEL	Long-term value: 0.005 ppm
as -NCO, Sens	

- **Regulatory information** OEL: 2021 CoP for the Safety, Health and Welfare at Work
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:** The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:** When used properly and under normal conditions, breathing protection is not required.
Use suitable respiratory protective device in case of insufficient ventilation.
Filter A/P2
Respiratory protection - Gas filters and combination filters according to (DIN EN 141)

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- Hand protection



Protective gloves

Check protective gloves prior to each use for their proper condition.
Only use chemical-protective gloves with CE-labelling of category III.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
After use of gloves apply skin-cleaning agents and skin cosmetics.

- Material of gloves

Recommended materials:

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.5 mm

Penetration time (min.): < 480

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.

- Penetration time of glove material

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.1 mm

Penetration time (min.): < 10

- Eye/face protection



Tightly sealed goggles

- Body protection:

protective clothing (EN 13034)

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- Colour:	Clear
- Odour:	Characteristic
- Odour threshold:	Not determined.
- Melting point/freezing point:	Undetermined.
- Boiling point or initial boiling point and boiling range	137 °C
- Flammability	Not applicable.
- Lower and upper explosion limit	
- Lower:	Not determined.
- Upper:	Not determined.
- Flash point:	69 °C (ISO 3679)
- Auto-ignition temperature:	Product is not selfigniting.
- Decomposition temperature:	Not determined.
- pH	Not determined.
- Viscosity:	
- Kinematic viscosity at 20 °C	2,500 mm ² /s
- Dynamic:	Not determined.
- Solubility	
- water:	Not miscible or difficult to mix.
- Partition coefficient n-octanol/water (log value)	Not determined.
- Density and/or relative density	
- Density at 20 °C:	1.1 g/cm ³
- Relative density	Not determined.
- Vapour density	Not determined.

- 9.2 Other information

- Appearance:	
- Form:	Fluid
- Important information on protection of health and environment, and on safety.	
- Explosive properties:	Not determined.

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- Solvent separation test:
- VOC (EC) 2.45 %
- Change in condition
- Evaporation rate Not determined.

- Information with regard to physical hazard classes

- Explosives Void
- Flammable gases Void
- Aerosols Void
- Oxidising gases Void
- Gases under pressure Void
- Flammable liquids Void
- Flammable solids Void
- Self-reactive substances and mixtures Void
- Pyrophoric liquids Void
- Pyrophoric solids Void
- Self-heating substances and mixtures Void
- Substances and mixtures, which emit flammable gases in contact with water Void
- Oxidising liquids Void
- Oxidising solids Void
- Organic peroxides Void
- Corrosive to metals Void
- Desensitised explosives Void

SECTION 10: Stability and reactivity

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions Exothermic reaction with amines and alcohols; gradual development of CO₂ with water, pressure build-up in closed containers; risk of bursting.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

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SECTION 11: Toxicological information

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

- Acute toxicity Harmful if inhaled.

- LD/LC50 values relevant for classification:

28182-81-2 Hexamethylene diisocyanate, oligomers

Oral	LD50	>5,000 mg/kg (rat) (OECD 423; female)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402) >2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	0.39 mg/l (rat) (OCED 403; Pauluhn, J. (2008).)

53880-05-0 Isophorondiisocyanate homopolymer

Oral	LD50	>14,000 mg/kg (rat) (OECD 401)
Inhalative	LC50/4 h	>5 mg/l (rat)

28182-81-2 Hexamethylene diisocyanate, oligomers; Uretdion type

Oral	LD50	>5,665 mg/kg (rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	0.158 mg/l (rat)
	ATEmix	0.5 mg/l (rat) (*2)

28182-81-2 Hexamethylene diisocyanate

Oral	LD50	>2,500 mg/kg (rat) (OECD 423; female)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402) >2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	0.39 mg/l (rat) ((dust & fork) OCED 403; Pauluhn, J. (2008).)
	ATEmix	1.5 mg/l (rat) (*2)

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

Oral	LD50	>15,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>3,400 mg/kg (rat) (OECD 402)

hydrocarbons, C9, aromatic

Oral	LD50	>3,492 mg/kg (rat) (OECD 401)
Dermal	LD50	>3,160 mg/kg (rabbit) (OECD 402)

4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

Inhalative	LC50/4 h	0.05 mg/l (ATE)
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822-06-0 hexamethylene-di-isocyanate

Oral	LD50	959 mg/kg (rat) (OECD 401)
Dermal	LD50	>7,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	0.124 mg/l (rat) (OECD 403)
	ATEmix	1.5 mg/l (rat) (*2)

- Skin corrosion/irritation

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

- Serious eye damage/irritation

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

- Respiratory or skin sensitisation

May cause an allergic skin reaction.

- Germ cell mutagenicity

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

- Carcinogenicity

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

- Reproductive toxicity

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

- STOT-single exposure

May cause respiratory irritation.

- STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

- Aspiration hazard

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

- Additional toxicological information:

* 2 Comment on ATE Information test atmosphere dust / mist:

The test atmosphere generated in the animal study is not representative of the workplace situation, the way the substance is marketed or likely to be used. That's why it can

Test result can not be used directly for hazard assessment. Based on a Expert judgment and weight-of-evidence is a modified classification of the acute Inhalation toxicity justified. Investigation on a comparable product.

Method: Expert assessment of the manufacturer.

- 11.2 Information on other hazards

- Endocrine disrupting properties

None of the ingredients is listed.

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SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

28182-81-2 Hexamethylene diisocyanate, oligomers

ErC50	>1,000 mg/l (DESMODESMUS SUBSPICATUS) (0-72h static / EU C.3)
	>199 mg/l (Scenedesmus subspicatus) (72h; guideline 67/548/EWG annex V; C3)
EC50	>100 mg/l (DESMODESMUS SUBSPICATUS) (72; OECD 201)
	>100 mg/l (Daphnia magna) (48h)
EC50	>10,000 mg/l (Belebtschlamm) (3h, EG/RL 88-302-EEC)
EC50	>1,000 mg/l (Scenedesmus subspicatus) (72h / DIN 38412)
	127 mg/l (daphnia) (48h static / EU C.2)
LC 50	8.9 mg/l (Brachydanio rerio (Ricefish))
LC50	>100 mg/l (Danio rerio (Zebraabärbling)) (96h)

53880-05-0 Isophorondiisocyanate homopolymer

LC50/96 h	>1.51 mg/l (Cyprinus Carpio) (Richtlinie 67/548/EWG, Anhang V, C.1.)
EC50	>3.36 mg/l (Daphnia magna) (OECD 202)
EC50	>10,000 mg/l (Belebtschlamm) (OECD 209)

28182-81-2 Hexamethylene diisocyanate, oligomers; Uretidion type

ErC50	50-100 mg/l (Scenedesmus subspicatus) (72h; guideline 67/548/EWG annex V; C3)
EC50	>100 mg/l (Daphnia magna) (48h, guideline 67/548/EWG annex 5, V2)
EC50	>5,560 mg/l (Belebtschlamm) (OECD 209)

28182-81-2 Hexamethylene diisocyanate

ErC50	>1,000 mg/l (DESMODESMUS SUBSPICATUS) (0-72h static / EU C.3)
	>199 mg/l (Scenedesmus subspicatus) (72h; guideline 67/548/EWG annex V; C3)
EC50	>100 mg/l (DESMODESMUS SUBSPICATUS) (72; OECD 201)
	>100 mg/l (Daphnia magna) (48h)
EC50	>10,000 mg/l (Belebtschlamm) (3h, EG/RL 88-302-EEC)
EC50	>1,000 mg/l (Scenedesmus subspicatus) (72h / DIN 38412)
	127 mg/l (daphnia) (48h static / EU C.2)
LC 50	8.9 mg/l (Brachydanio rerio (Ricefish))
LC50	>100 mg/l (Danio rerio (Zebraabärbling)) (96h)

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

LL 50	10 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (96h; OECD 203)
NOELR	0.13 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (72h)
EL50	4.6 mg/l (Pseudokirchneriella subcapitata) (72h; OECD 201)
	10 mg/l (Daphnia magna) (48h; OECD 202)
NOEC	97 mg/kg (Daphnia magna) (21 days)

hydrocarbons, C9, aromatic

LL 50	9.2 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (96h; OECD 203)
EL50	2.9 mg/l (Pseudokirchneriella subcapitata) (72h; OECD 201)
	3.2 mg/l (Daphnia magna) (48h; OECD 202)
EC50	>99 mg/l (Belebtschlamm) (10 min.; OECD 209)

822-06-0 hexamethylene-di-isocyanate

ErC50	>77.4 mg/l (DESMODESMUS SUBSPICATUS)
LC50/96 h	22 mg/l (Brachydanio rerio (Ricefish))
NOEC	11.7 mg/l (DESMODESMUS SUBSPICATUS) (72 h - EU method C.3)
EC0	>89.1 mg/l (daphnia) (48 hour - EU C.2)
EC50	842 mg/l (Bacteria) (3h-static - OECD 209)
LOEC	12.6 mg/l (DESMODESMUS SUBSPICATUS) (72 h - EU method C.3)

- 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.

- 12.5 Results of PBT and vPvB assessment

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

- 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

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- 12.7 Other adverse effects

- Remark: Harmful to fish

- Additional ecological information:

- General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods

- Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Disposal according to official regulations

- European waste catalogue

08 05 01*	waste isocyanates
15 01 10*	packaging containing residues of or contaminated by hazardous substances
17 02 03	plastic

- Uncleaned packaging:

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

SECTION 14: Transport information

- 14.1 UN number or ID number

- ADR, ADN, IMDG, IATA Void

- 14.2 UN proper shipping name

- ADR, ADN, IMDG, IATA Void

- 14.3 Transport hazard class(es)

- ADR, ADN, IMDG, IATA Void
- Class Void

- 14.4 Packing group

- ADR, IMDG, IATA Void

- 14.5 Environmental hazards:

- Marine pollutant: No

- 14.6 Special precautions for user Not applicable.

- 14.7 Maritime transport in bulk according to IMO instruments Not applicable.

- UN "Model Regulation": Void

SECTION 15: Regulatory information

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

- Directive 2012/18/EU

- Named dangerous substances - ANNEX I None of the ingredients is listed.

- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 74

- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

- REGULATION (EU) 2019/1148

- Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

- Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

- Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

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

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The safety data sheet issued is also compliant with the regulation Annex I of Regulation (EU) no. 453/2010 and Annex II of Regulation (EU) no. 2020/878.

- Relevant phrases

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H331 Toxic if inhaled.
- H332 Harmful 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.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.
- EUH066 Repeated exposure may cause skin dryness or cracking.
- EUH204 Contains isocyanates. May produce an allergic reaction.

- Department issuing SDS:

research & development

- Contact:

research & development

- Date of previous version:

07.07.2021

- Version number of previous version:

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- Abbreviations and acronyms:

- ADR: Accord relatif au transport international 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 Harmonised 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)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 1: Acute toxicity – Category 1
- Acute Tox. 3: Acute toxicity – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Resp. Sens. 1: Respiratory sensitisation – Category 1
- Skin Sens. 1: Skin sensitisation – Category 1
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- Asp. Tox. 1: Aspiration hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
- Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

- Sources

- www.echa.europa.eu
- www.baua.de
- IFA: Institute für Occupational Safety and Health of the German Social Accident Insurance:
- www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index.jsp
- www.dguv.de/ifa/gestis/gestis-dnel-liste

- * Data compared to the previous version altered.