

Safety data sheet
according to Regulation (EC) No. 1907/2006 as amended from
time to time

Printing date 28.02.2023



Version-No. 2 (replaces version 1)

Revision: 28.02.2023

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

- **1.1. Product identifier**
- Trade name / Article-No: **KLEIBERIT 303.5 ME**
- UFI: G2PQ-X00X-600K-RMMF
- **1.2. Relevant identified uses of the substance / mixture or uses advised against**
For professional users only.
- **Application of the substance / the mixture** Hardening agent/ Curing agent
- **1.3. Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
KLEIBERIT SE & Co. KG
Max-Becker-Str. 4
76356 Weingarten
Germany
- **Further information obtainable from:**
phone: +49 (0) 7244 62-0
FAX: +49 (0) 7244 700-0
E-Mail: hse@kleiberit.com
- **1.4. Emergency telephone number:**
+44 1235 239670 European regional number (European languages)
112 Emergency telephone number for Malta
543 22 22 Icelandic University Hospital

SECTION 2: Hazards identification

- **2.1. Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008 - GHS/CLP**
Acute Tox. 4 H332 Harmful if inhaled.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Dam. 1 H318 Causes serious eye damage.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.
- **2.2. Label elements**
- **Hazard pictograms**
 
GHS05 GHS07
- **Signal word** Danger
- **Hazard-determining components of labelling:**
aliphatic polyisocyanate, based on HDI
Polyoxyethylene tridecyl ether phosphate
N,N-Dimethylcyclohexylamine
hexamethylene-1,6-diisocyanate
- **Hazard statements**
H332 Harmful if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.

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H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing mist/vapours/spray.

P280 Wear protective gloves / eye protection / face protection.

P302+P352 IF ON SKIN: Wash with plenty of water and soap.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Additional information:

Contains isocyanates. May produce an allergic reaction.

2.3. Other hazards**Results of PBT and vPvB assessment**• **PBT:** Not applicable.• **vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.2 Mixtures**• **Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

Registry-No's	Identification / Classification GHS-CLP	%
CAS: 28182-81-2 Reg.nr.: 01-2119485796-17-XXXX	aliphatic polyisocyanate, based on HDI Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	~96%
CAS: 9046-01-9	Polyoxyethylene tridecyl ether phosphate Eye Dam. 1, H318; Skin Irrit. 2, H315; Aquatic Chronic 3, H412	~3%
CAS: 98-94-2 Reg.nr.: 01-2119533030-60-XXXX	N,N-Dimethylcyclohexylamine Flam. Liq. 3, H226; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Skin Corr. 1B, H314; Aquatic Chronic 2, H411	<1%
CAS: 822-06-0 Reg.nr.: 01-2119457571-37-XXXX	hexamethylene-1,6-diisocyanate 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%

• **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:**

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

After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

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- Take affected persons into fresh air and keep quiet.
- **After skin contact:**
Treat affected skin with cotton wool or cellulose. Then wash and rinse thoroughly with water and a mild cleaning agent.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **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.
- **5.2. Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Isocyanates
Nitrogen oxides (NO_x)
Traces: Hydrogen cyanide (HCN)
- **5.3. Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Particular danger of slipping on leaked/spilled product.
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2. Environmental precautions:**
Inform respective authorities in case of seepage into water course 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).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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**
Appropriate regular employee training.
Handle the substance preferably in closed system
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the vapour concentration below the workplace limit, wear an adequate respiratory protective device.

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

Avoid contact with the skin.

Handling procedures must be well documented.

· **General protective and hygienic measures:**

ensure that eye rinse stations and safety showers are close to workplace.

· **7.2. Conditions for safe storage, including any incompatibilities**· **Storage:**· **Requirements to be met by storerooms and receptacles:** Keep container tightly closed.· **Information about storage in one common storage facility:** Observe the national regulations.· **Further information about storage conditions:** None.· **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:**· **DNELs****28182-81-2 aliphatic polyisocyanate, based on HDI**Inhalative DNEL short term 1 mg/m³ (human being)DNEL long term 0.5 mg/m³ (human being)**98-94-2 N,N-Dimethylcyclohexylamine**Inhalative DNEL short term 35 mg/m³ (human being)DNEL long term 35 mg/m³ (human being)· **PNECs****28182-81-2 aliphatic polyisocyanate, based on HDI**

PNEC- Freshwater 0.127 mg/l (not specified)

PNEC-seawater 0.0127 mg/l (not specified)

PNEC-Freshwater sediment 266,701 mg/kg (not specified)

PNEC-Seawater sediment 26,670 mg/kg (not specified)

PNEC-soil 53.2 mg/kg (not specified)

PNEC-wastewater treatment plant 38.28 mg/l (not specified)

98-94-2 N,N-Dimethylcyclohexylamine

PNEC- Freshwater 0.002 mg/l (not specified)

PNEC-seawater 0.0002 mg/l (not specified)

PNEC-Freshwater sediment 0.0211 mg/kg (not specified)

PNEC-Seawater sediment 0.00211 mg/kg (not specified)

PNEC-soil 0.00305 mg/kg (not specified)

PNEC-wastewater treatment plant 20.6 mg/l (not specified)

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- **Ingredients with biological limit values:**

- **822-06-0 hexamethylene-1,6-diisocyanate**

- BGW (Germany) 15 µg/g Kreatinin

- Untersuchungsmaterial: Urin

- Probennahmezeitpunkt: Expositionsende bzw. Schichtende

- Parameter: Hexamethyldiamin (nach Hydrolyse)

- **CAS No. Designation of material % Type Value Unit**

- **822-06-0 hexamethylene-1,6-diisocyanate**

- AGW (Germany) Long-term value: 0.035 mg/m³, 0.005 ppm

- 1;=2=(I);DFG, 11, 12, Sa

- **8.2. Exposure controls**

- limit the exposure to:

- 8 hours

- **Appropriate engineering controls** No further data; see item 7.

- **Individual protection measures, such as personal protective equipment**

- **General protective and hygienic measures:** Do not inhale gases / fumes / aerosols.

- **Respiratory protection:** Filter A (DIN EN 14 387)

- **Hand protection**

- Protective gloves

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

- **Material of gloves A** Nitrile rubber - NBR: AlphaTec® (> 0,4 mm)

- **Eye/face protection** Tightly sealed goggles

- **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

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

- **General Information**

- **Physical state**

Fluid

- **Colour:**

Colourless

- **Odour:**

Odourless

- **Odour threshold:**

Not determined.

- **Melting point/freezing point:**

Undetermined.

- **Boiling point or initial boiling point and boiling range**

>160 °C

- **Flammability**

Not applicable.

- **Lower and upper explosion limit**

- **Lower:**

Not determined.

- **Upper:**

Not determined.

- **Flash point:**

>150 °C

- **Ignition temperature:**

Not applicable.

- **Decomposition temperature:**

Not determined.

- **pH**

Not determined.

- **Viscosity:**

- **Kinematic viscosity**

Not determined.

- **Dynamic at 20 °C:**

ca. 1.150 mPas

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· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density at 20 °C:	ca. 1.13 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.	
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· 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**
see item 10.3
No further relevant information available.
- **10.2. Chemical stability** Stable when stored and used properly.
- **Thermal decomposition / 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.

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- **10.6. Hazardous decomposition products:** No dangerous decomposition products known.

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 aliphatic polyisocyanate, based on HDI

Oral LD₅₀ >5,000 mg/kg (rat)
weibliche Ratte >2500 mg/kg
Dermal LD₅₀ >2,000 mg/kg (rabbit) (OECD 402)
>2,000 mg/kg (rat) (OECD 402)
Inhalative LC₅₀ /4 h 15 mg/l (rat)

98-94-2 N,N-Dimethylcyclohexylamine

Oral LD₅₀ 272 mg/kg (rat)
Dermal LD₅₀ >400 mg/kg (rat)
Inhalative LC₅₀ /4 h 4.45 mg/l (rat)

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye damage.
- **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** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1. Toxicity**
- **Aquatic toxicity:**

28182-81-2 aliphatic polyisocyanate, based on HDI

EC₅₀ >100 mg / l / 48h (water flea - daphnia)

98-94-2 N,N-Dimethylcyclohexylamine

EC₅₀ 75 mg / l / 48h (water flea - daphnia)
EC₅₀ >2 mg / l / 72h (algae)
IC₅₀ 22-46 mg / l / 72h (fish)

- **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.

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- **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.

- **12.6. Other adverse effects**

- **Behaviour in sewage processing plants:**

- **Remark:**

At correct sewage disposal in small quantities to biological sewage plants failures of the activated sludge are not expected.

- **Additional ecological information:**

- **General notes:**

Not known to be hazardous to water.

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

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.

- **European waste catalogue**

08 04 09* waste adhesives and sealants containing organic solvents or other hazardous substances

08 05 01* waste isocyanates

- **Uncleaned packaging:**

- **Recommendation:**

Non contaminated packagings may be recycled.

Empty contaminated packagings thoroughly. Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1. UN number or ID number**

- **ADR, IMDG, IATA** Void

- **14.2. UN proper shipping name**

- **DOT, ADR, IMDG, IATA** Void

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

- **Class** Void

- **14.4. Packing group**

- **ADR, IMDG, IATA** Void

- **14.5. Environmental hazards:**

Not applicable.

- **14.6. Special precautions for user**

Not applicable.

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

Not applicable.

SECTION 15: Regulatory information

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

See position no 2 - Hazards Identification

- **Directive 2012/18/EU - Seveso-III:**

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

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- **Regulation (EC) No 1907/2006 - REACH, ANNEX XVII** Conditions of restriction: 3, 74
- **Regulation (EU) No 649/2012**
 None of the ingredients is listed.
- **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.
- **National regulations:**
- **D: Waterhazard class** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Other regulations, limitations and prohibitive regulations:** Restricted to professional users.
- **VOC - 2010/75/EU [g/L]:** 0.0 g/l
- **VOC - 2010/75/EU [%]:** 0.00 %
- **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.

- **Relevant phrases**
- H226 Flammable liquid and vapour.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- 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.
- H411 Toxic to aquatic life with long lasting effects.

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H412 Harmful to aquatic life with long lasting effects.
 EUH204 Contains isocyanates. May produce an allergic reaction.

· **Department issuing SDS:** Safety & Environment

· **Version number of previous version:** 1

· **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

DOT: US Department of Transportation

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

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. 3: Acute toxicity – Category 3

Acute Tox. 1: Acute toxicity – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

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