

Safety data sheet

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

Printing date 24.02.2023

Version-No. 4 (replaces version 3)

Revision: 24.02.2023

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




- **1.1. Product identifier**
- Trade name / Article-No: **KLEIBERIT 588.4**
- UFI: 9FU1-S0HN-X002-CFH9
- **1.2. Relevant identified uses of the substance / mixture or uses advised against**
For professional users only.
- **Application of the substance / the mixture** Adhesives
- **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**

Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Carc. 2	H351	Suspected of causing cancer.
STOT SE 3	H335	May cause respiratory irritation.
STOT RE 2	H373	May cause damage to the respiratory system through prolonged or repeated exposure. <u>Route of exposure:</u> Inhalation.

- **2.2. Label elements**
- **Hazard pictograms**

GHS02 GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**
diphenylmethane-diisocyanate, isomers and homologous

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- H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
- H332 Harmful if inhaled.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317 May cause an allergic skin reaction.
- H351 Suspected of causing cancer.
- H335 May cause respiratory irritation.
- H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

· Precautionary statements

- P102 Keep out of reach of children.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P211 Do not spray on an open flame or other ignition source.
- P251 Do not pierce or burn, even after use.
- P260 Do not breathe mist/vapours/spray.
- P280 Wear protective gloves / eye 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.
- P314 Get medical advice/attention if you feel unwell.
- P410 Protect from sunlight.
- P412 Do not expose to temperatures exceeding 50 °C/122 °F.

· Additional information:

Contains isocyanates. May produce an allergic reaction.
 As from 24 August 2023 adequate training is required before industrial or professional use.

· Information concerning particular hazards for human and environment:

- Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
- Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
- This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

· 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.

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· **Dangerous components:**

Registry-No's	Identification / Classification GHS-CLP	%
CAS: 9016-87-9	diphenylmethane-diisocyanate, isomers and homologous Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 5 % Eye Irrit. 2; H319: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; C ≥ 5 %	40-50%
CAS: 13674-84-5 Reg.nr.: 01-2119447716-31-XXXX	tris(2-chlorisopropyl)-phosphate Acute Tox. 4, H302	10-15%
CAS: 75-28-5	isobutane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	1-10%
CAS: 107-21-1 Reg.nr.: 01-2119456816-28-XXXX	ethanediol STOT RE 2, H373; Acute Tox. 4, H302	1-10%
CAS: 115-10-6	dimethyl ether Flam. Gas 1A, H220; Press. Gas (Comp.), H280	1-10%
CAS: 74-98-6	propane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	1-5%

· **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:**

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

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

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

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.

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- **5.1. Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **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.
Ensure adequate ventilation
Keep away from ignition sources.
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2. Environmental precautions:** Prevent seepage into sewage system, workpits and cellars.
- **6.3. Methods and material for containment and cleaning up:**
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
Enclosure or extractor facilities are required.
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.
Not less than 3-5 air exchanges per hour
Spraying: in vented cabin with laminar air flow
Wear protective gloves/protective clothing/eye protection/face protection.
Use only in well ventilated areas.
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
regular check up, maintenance and cleaning of equipment and machines
Application temperature is not higher than 20°C above the surrounding temperature
Avoid contact with the skin.
Use drum pumps or pour from the container carefully
if possible use tools with long handles

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Handling procedures must be well documented.

additional to professional application with multiple and/or significant contact
limit the exposure to 4 hours

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

Open and handle receptacle with care.

Clean the pipe before decoupling

· **Information about fire - and explosion protection:**

Do not spray onto a naked flame or any incandescent material.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

· **General protective and hygienic measures:** Keep good industrial hygiene.

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

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Observe official regulations on storing packagings with pressurised containers.

· **Information about storage in one common storage facility:** Observe the national regulations.

· **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Do not seal receptacle gas tight.

· **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**

9016-87-9 diphenylmethane-diisocyanate, isomers and homologous

Dermal DNEL short term 50 mg/kg (human being)

DNEL long term 0.05 mg/kg (human being)

Inhalative DNEL short term 0.1 mg/m³ (human being)

13674-84-5 tris(2-chlorisopropyl)-phosphate

Dermal DNEL short term 8 mg/kg (human being)

DNEL long term 2.08 mg/kg (human being)

Inhalative DNEL short term 22.4 mg/m³ (human being)

DNEL long term 5.82 mg/m³ (human being)

107-21-1 ethanediol

Dermal DNEL long term 106 mg/kg (human being)

Inhalative DNEL long term 35 mg/m³ (human being)

· **PNECs**

9016-87-9 diphenylmethane-diisocyanate, isomers and homologous

PNEC- Freshwater >1 mg/l (not specified)

PNEC-seawater >0.1 mg/l (not specified)

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PNEC-soil >1 mg/kg (not specified)

PNEC-wastewater treatment plant >1 mg/l (not specified)

13674-84-5 tris(2-chlorisopropyl)-phosphate

PNEC- Freshwater 0.64 mg/l (not specified)

PNEC-seawater 0.064 mg/l (not specified)

PNEC-Freshwater sediment 13.4 mg/kg (not specified)

PNEC-Seawater sediment 1.34 mg/kg (not specified)

PNEC-soil 1.7 mg/kg (not specified)

PNEC-wastewater treatment plant 7.84 mg/l (not specified)

107-21-1 ethanediol

PNEC- Freshwater 10 mg/l (not specified)

PNEC-seawater 1 mg/l (not specified)

PNEC-periodic release 10 mg/l (not specified)

PNEC-Freshwater sediment 37 mg/kg (not specified)

PNEC-Seawater sediment 3.7 mg/kg (not specified)

PNEC-soil 1.53 mg/kg (not specified)

PNEC-wastewater treatment plant 199.5 mg/l (not specified)

CAS No. Designation of material % Type Value Unit**9016-87-9 diphenylmethane-diisocyanate, isomers and homologous**AGW (Germany) Long-term value: 0.05 E mg/m³

1;=2=(I);DFG, H, Sah, Y, 12

75-28-5 isobutaneAGW (Germany) Long-term value: 2400 mg/m³, 1000 ppm

4(II);DFG

107-21-1 ethanediolIOELV (INT) Short-term value: 104 mg/m³, 40 ppmLong-term value: 52 mg/m³, 20 ppm

Skin

AGW (Germany) Long-term value: 26 mg/m³, 10 ppm

2(I);DFG, EU, H, Y, 11

115-10-6 dimethyl etherIOELV (INT) Long-term value: 1920 mg/m³, 1000 ppmAGW (Germany) Long-term value: 1900 mg/m³, 1000 ppm

8(II);DFG, EU

74-98-6 propaneAGW (Germany) Long-term value: 1800 mg/m³, 1000 ppm

4(II);DFG

8.2. Exposure controls

limit the exposure to:

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8 hours

Ensure that activities are executed by specialists or authorised personnel only.

· **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)

At spray application respiratory protection must be worn.

· **Hand protection** Protective gloves· **Material of gloves** A Nitrile rubber - NBR: AlphaTec® (> 0,4 mm)· **Eye/face protection** Safety glasses· **Body protection:** Protective work clothing· **Environmental exposure controls**

The floor surface in the facility has to be sealed.

Ensure that all wastewater is collected and treated in a wastewater treatment plant.

Waste air is to be released into the atmosphere only via suitable separators.

SECTION 9: Physical and chemical properties

· **9.1. Information on basic physical and chemical properties**· **General Information**· **Physical state**

Aerosol

· **Colour:**

Different according to colouring

· **Odour:**

Light

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

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

Not applicable, as aerosol.

· **Flammability**

Not applicable.

· **Lower and upper explosion limit**· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

-21 °C

· **Ignition temperature:**

199 °C

· **Decomposition temperature:**

Not determined.

· **pH**

Not determined.

· **Viscosity:**· **Kinematic viscosity**

Not determined.

· **Dynamic:**

Not determined.

· **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. 0.03 g/cm³· **Relative density**

Not determined.

· **Vapour density**

Not determined.

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· **9.2. Other information**· **Appearance:**· **Form:** Aerosol· **Important information on protection of health and environment, and on safety.**· **Auto-ignition temperature:** Product is not selfigniting.· **Explosive properties:** Not determined.· **Change in condition**· **Evaporation rate** Not applicable.· **Information with regard to physical hazard classes**· **Explosives** Void· **Flammable gases** Void· **Aerosols** Extremely flammable aerosol. Pressurised container:
May burst if heated.· **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.· **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.

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- **LD/LC₅₀ values relevant for classification:**

- **9016-87-9 diphenylmethane-diisocyanate, isomers and homologous**

- Oral LD₅₀ >10,000 mg/kg (rat)
 - Dermal LD₅₀ >9,400 mg/kg (rabbit)
 - Inhalative LC₅₀ /4 h 11 mg/l (x00) (Calculation (ATE))

- **13674-84-5 tris(2-chlorisopropyl)-phosphate**

- Oral LD₅₀ 500 mg/kg (ATE)
 - Dermal LD₅₀ >2,000 mg/kg (rabbit)

- **107-21-1 ethanediol**

- Oral LD₅₀ 500 mg/kg (ATE)
 - Dermal LD₅₀ >3,500 mg/kg (mouse)

- **Note:**

- diphenylmethane-diisocyanate:

- The test atmosphere generated in the animal study is not representative of workplace environments, how the substance is placed on the market, and how it can reasonably be expected to be used. Therefore the test result cannot be directly applied for the purpose of assessing hazard. Based on expert judgment and the weight of the evidence, a modified classification for acute inhalation toxicity is justified.

- **Skin corrosion/irritation** Causes skin irritation.

- **Serious eye damage/irritation** Causes serious eye irritation.

- **Respiratory or skin sensitisation**

- May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 - May cause an allergic skin reaction.

- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

- **Carcinogenicity** Suspected of causing cancer.

- **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 the respiratory system through prolonged or repeated exposure. Route of exposure:
Inhalation.

- **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:**

- **9016-87-9 diphenylmethane-diisocyanate, isomers and homologous**

- LC₅₀ >1,000 mg / l / 96h (fish)

- EC₅₀ >1,000 mg / l / 24h (water flea - daphnia)

- EC₅₀ >1,640 mg / l / 72h (algae)

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13674-84-5 tris(2-chlorisopropyl)-phosphateLC₅₀ 56.2 mg / l / 96h (Zebrafish - Danio rerio)EC₅₀ 131 mg / l / 48h (water flea - daphnia)IC₅₀ 82 mg / l / 72h (green algae-Ps.kirchneriella subcapitata)**107-21-1 ethanediol**LC₅₀ 72,860 mg / l / 96h (fish)EC₅₀ >100 mg / l / 48h (water flea - daphnia)

- **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.
- **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:** 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 05 01* waste isocyanates
16 05 04* gases in pressure containers (including halons) containing hazardous substances
15 01 10* packaging containing residues of or contaminated by hazardous substances
- **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** UN1950
- **14.2. UN proper shipping name**
- **DOT** Aerosols
- **ADR** 1950 AEROSOLS
- **IMDG, IATA** AEROSOLS

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· 14.3. Transport hazard class(es)	
· Class	2 5F Gases.
· Label	2.1
· Class	2 Gases.
· Label	2.1
· 14.4. Packing group	
· ADR, IMDG, IATA	Void
· 14.5. Environmental hazards:	Not applicable.
· 14.6. Special precautions for user	Warning: Gases.
· Hazard identification number (Kemler code):	23
· EMS Number:	F-D,S-U
· Stowage Code	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· 14.7. Maritime transport in bulk according to IMO instruments	Not applicable.
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· Transport category	2
· Tunnel restriction code	D
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity

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.
- Seveso category P3a FLAMMABLE AEROSOLS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- Regulation (EC) No 1907/2006 - REACH, ANNEX XVII Conditions of restriction: 3, 56, 74

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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 [%]:** 15.90 %**· National Regulations (others than Germany or EU)****· French Regulation (Decree No. 2011-321):** class A+**· 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

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

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

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

EUH204 Contains isocyanates. May produce an allergic reaction.

· Department issuing SDS: Safety & Environment**· Version number of previous version:** 3*(Contd. on page 13)*

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Trade name / Article-No: KLEIBERIT 588.4*(Contd. of page 12)***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. Gas 1A: Flammable gases – Category 1A
Aerosol 1: Aerosols – Category 1
Press. Gas (Comp.): Gases under pressure – Compressed gas
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
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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