

**Safety data sheet**
according to EU 453/2010

Printing date 24.08.2016

Version-No. 2

Revision: 24.08.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking· **1.1. Product identifier**· Trade name / Article-No: **KLEIBERIT 712.7**· **1.2. Relevant identified uses of the substance / mixture or uses advised against**

No further relevant information available.

· **Application of the substance / the mixture** Adhesives· **1.3. Details of the supplier of the safety data sheet**· **Manufacturer/Supplier:**

KLEBCHEMIE

M.G.Becker GmbH & Co. KG

Max Becker Str. 4

D - 76356 Weingarten / Baden

Germany

· **Further information obtainable from:**

Telefon: +49-(0)7244-62-0

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· **1.4. Emergency telephone number:**

phone: +49-7244 62 486 / Language: English, German

available on workdays (Mo - Fr) 08:00 am to 04:00 pm (Central European Time- CET)

SECTION 2: Hazards identification· **2.1. Classification of the substance or mixture**· **Classification according to Regulation (EC) No 1272/2008 - GHS/CLP**

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.

· **2.2. Label elements**· **Hazard pictograms**

GHS08

· **Signal word** Danger· **Hazard-determining components of labelling:**

diphenylmethane-4,4'-diisocyanate

· **Hazard statements**

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

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

· **Precautionary statements**

P280 Wear protective gloves.

P261 Avoid breathing vapours.

P314 Get medical advice/attention if you feel unwell.

· **Additional information:**

Contains isocyanates. May produce an allergic reaction.

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· **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**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· **Results of PBT and vPvB assessment**

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

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

- **Description:** mixture of synthetic plastics, based on polyurethane

· **Dangerous components:**

| Registry-No's | Identification / Classification GHS-CLP | % |
|--------------------------------|---|--------|
| CAS: 101-68-8 | diphenylmethane-4,4'-diisocyanate | < 2.5% |
| EINECS: 202-966-0 | Resp. Sens. 1, H334; Carc. 2, H351; Acute Tox. 4, H332; Skin Irrit. | |
| Reg.nr.: 01-2119457014-47-XXXX | 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 | |

- **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**

· **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.

· **After skin contact:**

After contact with the molten product, cool rapidly with cold water.

If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **Information for doctor:**

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

Asthma attacks

Allergic reactions

· **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.

· **For safety reasons unsuitable extinguishing agents:** None

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

Nitrogen oxides (NO_x)

Isocyanates

Traces:

Hydrogen cyanide (HCN)

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- **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.
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2. Environmental precautions:** No special measures required.
- **6.3. Methods and material for containment and cleaning up:**
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

- **Handling:**
- **7.1. Precautions for safe handling**
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
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
Handle the substance preferably in closed system
Spraying: in vented cabin with laminar air flow
Prevent formation of dust.
Wear protective gloves/protective clothing/eye protection/face protection.
Appropriate regular employee training.
Avoid contact with the skin.
Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.
Absorb spilled amount immediately.
It is advised against using the product if there is a sensitivity of the airways or skin (asthma, chronic bronchitis, chronic skin disease)
additional to professional application with multiple and/or significant contact
limit the exposure to 4 hours
- **Information about fire - and explosion protection:** No special measures required.
- **General protective and hygienic measures:** Immediately remove all soiled and contaminated clothing
- **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:** Protect from humidity and water.
- **7.3. Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1. Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
- **DNELs**

101-68-8 diphenylmethane-4,4'-diisocyanate

Dermal DNEL short 50.0 mg/kg (human being)

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Inhalative DNEL short 0.1 mg/m³ (human being)
 DNEL long term 0.05 mg/m³ (human being)

· PNECs
101-68-8 diphenylmethane-4,4'-diisocyanate

PNEC- Freshwater 1 mg/l (x00)
 PNEC-seawater 0.1 mg/l (x00)
 PNEC-periodic release 10 mg/l (x00)
 PNEC-soil 1 mg/kg (x00)
 PNEC-wastewater treatment plant 1 mg/l (x00)

· CAS No. Designation of material % Type Value Unit
101-68-8 diphenylmethane-4,4'-diisocyanate

WEL Short-term value: 0.07 mg/m³
 Long-term value: 0.02 mg/m³
 all isocyanates, as -NCO

· 8.2. Exposure controls

limit the exposure to:
 8 hours

· Personal protective equipment:

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

· Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation:
 Filter A/P2 (EN 14387)

At spray application respiratory protection must be worn.

· **Protection of hands:** Heat resistant gloves

· **Material of gloves:** Leather gloves

· **Eye protection:** Goggles recommended during refilling

· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1. Information on basic physical and chemical properties
· General Information
· Appearance:

Form: Solid
Colour: According to product specification

· **Odour:** Light

· **Odour threshold:** Not determined.

· **pH-value:** Not applicable.

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.
Softening temperature / range: ca. 70 °C (ring + ball)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:** > 300 °C

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

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- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapour pressure:** Not applicable.
- **Density at 20 °C:** ca. 1.1 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Kinematic:** Not determined
 - Organic solvents:** 0.0 %
- **9.2. Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1. Reactivity** see item 10.3
- **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:** Isocyanates
- **Additional information:**

When hotmelt adhesives are melted and applied, vapours are set free and an unpleasant odour can occur, even if the recommended working temperature has been observed. Moreover if the prescribed working temperature is exceeded over a longer period, harmful decomposition products can develop. Precautions should be taken to eliminate the vapours, e.g. by using a suitable ventilation system.

Therefore measures for the elimination of the vapours have to be taken, e.g. by means of an appropriate ventilation/ exhaust device.

SECTION 11: Toxicological information

- **11.1. Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC₅₀ values relevant for classification:**
 - 101-68-8 diphenylmethane-4,4'-diisocyanate**
 - Oral LD₅₀ > 10000 mg/kg (rat) (84/449/EWG, B.1)
 - Dermal LD₅₀ > 9400 mg/kg (rabbit) (OECD 402)
 - Inhalative LC₅₀/4h_(dust,mist) 0.49 mg/l (rat) (OECD 403)
- **Primary irritant effect:**
- **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 allergy or asthma symptoms or breathing difficulties if inhaled.
 - May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.

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- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **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.

SECTION 12: Ecological information

- **12.1. Toxicity**
- **Aquatic toxicity:**
 - 101-68-8 diphenylmethane-4,4'-diisocyanate**
 - LC₅₀ > 1000 mg / l / 96h (fish)
 - EC₅₀ > 1000 mg / l / 24h (water flea - Daphnia)
 - IC₅₀ > 1640 mg / l / 72h (algae)
- **12.2. Persistence and degradability** No further relevant information available.
- **Other information:** The product is not easily biodegradable.
- **12.3. Bioaccumulative potential** No further relevant information available.
- **12.4. Mobility in soil** No further relevant information available.
- **Ecotoxic 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.
- **12.5. Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6. Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1. Waste treatment methods**
- **Recommendation**
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **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** Unnecessary
- **14.2. UN proper shipping name** Unnecessary
- **14.3. Transport hazard class(es)**
- **ADR**
- **Label** -
- **14.4. Packing group** Unnecessary
- **14.5. Environmental hazards:**
- **Marine pollutant:** No
- **14.6. Special precautions for user** Not applicable.
- **14.7. Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

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SECTION 15: Regulatory information

- **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
See position no 2 - Hazards Identification
- **EU-Regulations**

101-68-8 diphenylmethane-4,4'-diisocyanate: REACH, Annex XVII, No. 56a
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 56a
- **National regulations:**
- **Other regulations, limitations and prohibitive regulations: Restricted to professional users.**
- **EU: VOC - Volatile Organic Compounds (Directive 13/1999/EC)**
- **VOC - prtion [mass-%]: 0 %**
- **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**
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.
- **Department issuing SDS:** Safety & Environment
- **Contact:** Dr. Wolfgang Stüber
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
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)
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
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
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
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- *** Data compared to the previous version altered. -**