

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

Printing date 31.03.2014


Version-No. 5

Revision: 31.01.2014

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

- **1.1. Product identifier**
- Trade name / Article-No: **KLEIBERIT 702**
- Article number: 702.5 / 702.7 / 702.9
- **1.2. Relevant identified uses of the substance / mixture or uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** 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:**  
phone: +49-7244-62-0  
FAX: +49-7244-700-0  
Email: hse@kleiberit.com
- **1.4. Emergency telephone number:**  
phone: +49-7244 62 486  
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.  
Carc. 2 H351 Suspected of causing cancer.  
Skin Sens. 1 H317 May cause an allergic skin reaction.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC - DSD/DPD**  
Xn; Harmful  
R40: Limited evidence of a carcinogenic effect.  
Xn; Sensitising  
R42/43: May cause sensitisation by inhalation and skin contact.
- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **2.2. Label elements**
- **Hazard pictograms**  
  
GHS08
- **Signal word** Danger
- **Hazard-determining components of labelling:**  
diphenylmethane-4,4'-diisocyanate

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**· 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.

**· 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 synthetic plastics, based on polyurethane

**· Dangerous components:**

CAS-No	Description	Index R-phrases	%
CAS: 101-68-8	diphenylmethane-4,4'-diisocyanate		< 2,5%
Reg.nr.: 01-2119457014-47-XXXX	Xn R20-40-48/20; Xn R42/43; Xi R36/37/38		
	Carc. Cat. 3		
	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		

### 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.

**· After eye contact:**

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

**· After swallowing:** Seek medical treatment.

**· 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.

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### SECTION 5: Firefighting measures

- **5.1. Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, 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<sub>x</sub>)  
Isocyanates  
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**  
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2. Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3. Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Allow to solidify. Pick up mechanically.
- **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**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of dust.
- **Information about fire - and explosion protection:** No special measures required.
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Avoid contact with the skin.  
Do not inhale gases / fumes / aerosols.  
Store protective clothing separately.  
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.

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- **8.1. Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
- **Ingredients with biological limit values:**

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

BGW (Germany) 10 µg/g Kreatinin

U

b

4,4'-Diaminodiphenylmethan

- | CAS No.   | Designation of material     | %                         | Type                        | Value | Unit |
|---|-----------------------------|---------------------------|-----------------------------|-------|------|
| <b>101-68-8 diphenylmethane-4,4'-diisocyanate</b> |                             |                           |                             |       |      |
| WEL (Great Britain)                               | Short-term value:           | 0,07                      | mg/m <sup>3</sup>           |       |      |
|   | Long-term value:            | 0,02                      | mg/m <sup>3</sup>           |       |      |
|   | Sen; as -NCO                |                           |                             |       |      |
| AGW (Germany)                                     | 0,05                        | mg/m <sup>3</sup>         |                             |       |      |
|   | 1;=2=(I);DFG, 11, 12, Sa, Y |                           |                             |       |      |
| PEL (USA)   | Short-term value:           | C 0,2                     | mg/m <sup>3</sup> , C 0,02  | ppm   |      |
| REL (USA)   | Short-term value:           | C 0,2*                    | mg/m <sup>3</sup> , C 0,02* | ppm   |      |
|   | Long-term value:            | 0,05                      | mg/m <sup>3</sup> , 0,005   | ppm   |      |
|   | *10-min                     |                           |                             |       |      |
| TLV (USA)   | 0,051                       | mg/m <sup>3</sup> , 0,005 | ppm                         |       |      |

**101-68-8 diphenylmethane-4,4'-diisocyanate**WEL (Great Britain) Short-term value: 0,07 mg/m<sup>3</sup>Long-term value: 0,02 mg/m<sup>3</sup>

Sen; as -NCO

AGW (Germany) 0,05 mg/m<sup>3</sup>

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

PEL (USA) Short-term value: C 0,2 mg/m<sup>3</sup>, C 0,02 ppmREL (USA) Short-term value: C 0,2\* mg/m<sup>3</sup>, C 0,02\* ppmLong-term value: 0,05 mg/m<sup>3</sup>, 0,005 ppm

\*10-min

TLV (USA) 0,051 mg/m<sup>3</sup>, 0,005 ppm

- **Additional information:** WEL: workplace exposure limit

**8.2. Exposure controls**

- **Personal protective equipment:**

- **Respiratory protection:**

At spray application respiratory protection must be worn.

Filter A/P2 (EN 14387)

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **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**

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

- **Flash point:** Not applicable.

- **Ignition temperature:** > 300 °C

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

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

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- **Density at 20 °C:** ca. 1,1 g/cm<sup>3</sup>
- **Solubility in / Miscibility with water:** Insoluble.
- **Viscosity:**
- **Dynamic:** Not applicable
- **9.2. Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1. Reactivity** Not applicable
- **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

### SECTION 11: Toxicological information

- **11.1. Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC<sub>50</sub> values relevant for classification:**
- 101-68-8 diphenylmethane-4,4'-diisocyanate**
- Oral LD<sub>50</sub> >2000 mg/kg (rat) (84/449/EWG, B.1)
- Dermal LD<sub>50</sub> >9400 mg/kg (rabbit) (OECD 402)
- Inhalative LC<sub>50</sub>/4h<sub>(Staeube,Nebel)</sub> 0,368 mg/l (rat) (OECD 403)
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:**
- Sensitization possible through inhalation.
- Sensitization possible through skin contact.
- **Additional toxicological information:**
- The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- 67/584 EC, 1272/2008 EC (28.-31.ATP, 1.ATP): Cancerogen Cat. 3 / R 40 (DSD, DPD); Cat 2 / H 351 (GHS, CLP)

### SECTION 12: Ecological information

- **12.1. Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2. Persistence and degradability** No further relevant information available.
- **Other information:** The product is difficultly biodegradable.
- **12.3. Bioaccumulative potential** No further relevant information available.
- **12.4. Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
- **12.5. Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **12.6. Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1. Waste treatment methods**
- **Recommendation**  
Hand over to hazardous waste disposers.  
Adhesive reacted completely:  
Can be disposed of with household garbage in small quantities after curing.
- **European waste catalogue**  
08 04 09\*: waste adhesives and sealants containing organic solvents or other dangerous substances  
Adhesive reacted completely:  
08 04 10: waste adhesives and sealants other than those mentioned in 08 04 09
- **Uncleaned packaging:**
- **Recommendation:**  
Empty contaminated packagings thoroughly. Disposal must be made according to official regulations.  
Non contaminated packagings may be recycled.

### SECTION 14: Transport information

- **14.1. UN-Number** Void
- **ADR** Void
- **14.2. UN proper shipping name** Void
- **14.3. Transport hazard class(es)**
- **ADR**
- **Class** No dangerous good
- **Label** -
- **IMDG**
- **Class** No dangerous good
- **IATA**
- **Class** Not classified as dangerous goods under IATA regulations
- **14.4. Packing group** Void
- **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 MARPOL73/78 and the IBC Code** Not applicable.

### SECTION 15: Regulatory information

- **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**  
See position 2 - Hazards Identification
- **EU-Regulations**  
  
101-68-8 diphenylmethane-4,4'-diisocyanate: REACH, Annex XVII, No. 56
- **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.**  
Observe the restriction of application in accordance to Regulation (EC) 1907/2006 (REACH), Annex XVII
- **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.

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**· 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.
- H373 May cause damage to organs through prolonged or repeated exposure.
- R20 Harmful by inhalation.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R40 Limited evidence of a carcinogenic effect.
- R42/43 May cause sensitisation by inhalation and skin contact.
- R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

**· Department issuing MSDS: Safety & Environment**
**· Contact: Dr. Wolfgang Stüber**
**· Abbreviations and acronyms:**

- ICAO: International Civil Aviation Organization
- ADR: Accord européen sur le transport 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 Harmonized System of Classification and Labelling of Chemicals
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

**· \* Data compared to the previous version altered. -**

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