# Safety Data Sheet
**according to P.U.(A) 310/2013**

Printing date 16.03.2024 Version number 22 Revision: 16.03.2024

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## 1 Identification of the hazardous chemical and of the supplier

· **Product identifier**

· **Trade name** **Konudur 170 BT - Komponente A**

· **Recommended use of the chemical and restrictions on use** No further relevant information available.

· **Application of the substance / the mixture** Epoxy resin

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

MC-Bauchemie Müller GmbH & Co. KG
Am Kruppwald 1-8
D-46238 Bottrop
Tel.: +49(0)2041-101-0
Fax.: +49(0)2041-101-400
E-Mail: info@mc-bauchemie.de

MC-Bauchemie AG
Hagackerstr. 10
CH-8953 Dietikon
Tel.: +44-7400510
Fax : +44-7400533

· **Informing department:** msds@mc-bauchemie.de

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## 2 Hazard identification

· **Classification of the substance or mixture**

| | |
|---|---|
| Skin Irrit. 2 | H315 Causes skin irritation. |
| Eye Irrit. 2 | H319 Causes serious eye irritation. |
| Skin Sens. 1 | H317 May cause allergic skin reaction. |
| Carc. 2 | H351 Suspected of causing cancer. Route of exposure: Inhalation. |
| STOT RE 1 | H372 Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation. |
| Aquatic Chronic 2 | H411 Toxic to aquatic life with long lasting effects. |

· **Label elements**

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**

GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:** epoxide derivates
crystalline silica

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**Trade name Konudur 170 BT - Komponente A**

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*titanium dioxide*
*Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)] dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl) oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)] dioxirane*
*Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane (1:2)*

· **Hazard statements** *Causes skin irritation.*
*Causes serious eye irritation.*
*May cause allergic skin reaction.*
*Suspected of causing cancer. Route of exposure: Inhalation.*
*Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.*
*Toxic to aquatic life with long lasting effects.*

· **Precautionary statements** *Do not breathe dust/fume/gas/mist/ vapours/spray.*
*Wear protective gloves / eye protection / face protection.*
*Use personal protective equipment as required.*
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
*Take off contaminated clothing and wash before reuse.*
*Wash contaminated clothing before reuse.*

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** *Not applicable.*

· **vPvB:** *Not applicable.*

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## 3 Composition and information of the ingredients of the hazardous chemical

· **Chemical characterisation: Mixtures**

· **Description:** *Mixture consisting of the following components.*

· **Dangerous components:**

| | | |
|---|---|---|
| CAS: 1675-54-3 | epoxide derivates<br>Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 | 30-60% |
| CAS: 14808-60-7 | crystalline silica<br>STOT RE 1, H372 | 30-60% |
| CAS: 9003-36-5 | Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane<br>Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317 | ≥10-<25% |
| CAS: 933999-84-9 | Reaction products of hexane-1,6-diol with 2-(chloromethyl)oxirane (1:2)<br>Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 3, H412 | ≥2.5-<10% |

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| | | |
|---|---|---|
| CAS: 13463-67-7 | titanium dioxide<br>Carc. 2, H351 | ≥1-<1.5% |

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

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## 4 First-aid measures

· **Description of first aid measures**

· **General information** Remove contaminated clothing immediately. Consult a doctor if symptoms occur. Move affected person to fresh air.

· **After inhalation** Supply fresh air; seek medical advice if symptoms occur.
If unconscious, place in recovery position and seek medical advice.

· **After skin contact** In case of contact with skin, wash carefully with plenty of soap and water. Consult a doctor in case of skin reactions.

· **After eye contact** Rinse opened eye for several minutes under running water.
Call a doctor immediately

· **After swallowing** Rinse mouth with water. Never give anything by mouth to an unconscious person. DO NOT induce vomiting. If symptoms persist, consult a doctor.

· **Information for doctor**

· **Most important symptoms and effects, both acute and delayed** Advice for the doctor: Elementary aid, decontamination, symptomatic treatment.

## 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:** No special measures required.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.

· **Environmental precautions:** Inform respective authorities in case product reaches water or sewage system.

· **Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

· **Reference to other sections** See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.

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See Section 13 for information on disposal.

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## 7 Handling and storage

· **Handling**

· **Precautions for safe handling** Open and handle containers with care.
Only use in well-ventilated areas (e.g. open construction, outdoor areas), in rooms without air exchange (e.g. closed rooms, underground car parks) ventilation measures are required.
are required.
Wear suitable personal protective equipment (see section 8). Avoid contact with eyes, skin and clothing. Change contaminated or damaged gloves and contaminated clothing immediately and wash skin immediately. Mix slowly, partially covering the mixing container. Pour carefully and slowly when repotting. Observe the BGBau technical data sheet and practical guide for handling epoxy resins. Open and handle containers with care.

· **Information about protection against explosions and fires:** Ensure sufficient air exchange and/or extraction in the working areas. Take precautionary measures to avoid electrostatic discharges.

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

· **Storage**

· **Requirements to be met by storerooms and containers:** No special requirements.

· **Further information about storage conditions:** Keep container tightly closed in a well-ventilated place.

· **Storage class** 6.1C

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## 8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**

| · **Components with critical values that require monitoring at the workplace:** | |
|---|---|
| **CAS: 14808-60-7 crystalline silica** | |
| PEL (Malaysia) | Long-term value: 0.1* mg/m³<br>*Pecahan ternafaskan |

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures** Keep away from food, drink and animal feed.
Remove soiled, soaked clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with eyes and skin.

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· **Breathing equipment:** *If workplace limit values cannot be complied with by ventilation measures or if rooms cannot be technically ventilated, respiratory protection must be worn: Use combination filter A1-P2 (brown/ white) in rooms that cannot be ventilated. If oxygen deficiency is expected, use self-contained breathing apparatus. Observe wearing time limits according to §9 (3) GefStoffV in conjunction with BGR 190.*

· **Protection of hands:** *Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

· **Material of gloves** *You can find help with choosing gloves on the website https://www.bgbau.de/fileadmin/Gisbau/Projekte.pdf*
*For example, we recommend the Sol-vex 37-900 protective gloves from Ansell GmbH. The breakthrough time of the protective gloves can be found under point 8 "Penetration time of the glove material".*
*The selection of a suitable glove depends not only on the material, but also on other quality features and varies from manufacturer to manufacturer. As the product*
*is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.*
*Nitrile rubber*
*Recommended material thickness:≥ 0.4 mm*

· **Penetration time of glove material** *The breakthrough times of the Sol-vex 37-900 protective gloves are around 8 hours.*
*The following applies to all other gloves:*
*The exact breakthrough time must be obtained from the protective glove manufacturer and adhered to.*
*Nitrile rubber*
*Material thickness: ≥ 0.40 mm*
*Penetration time: ≥ 480 min*
*Butyl rubber:*
*Material thickness: ≥ 0.5 mm*
*Penetration time: ≥ 480 min*

· **Eye protection:** *Tight-fitting safety goggles.*
*Safety goggles.*

· **Body protection:** *Protective clothing*
*Suitable protective clothing should be worn when working with epoxy resins. In addition to normal work clothing (long trousers, long-sleeved shirt or T-shirt), disposable overalls, aprons, overshoes, sleeve protectors etc. may be necessary depending on the activity. Uncovered areas of skin should be avoided as far as possible, even in hot weather. If the work involves kneeling, the lower leg area should be protected by protective trousers.*

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## 9 Physical and chemical properties

| | |
|---|---|
| · **Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Appearance:** | |
| **Form:** | Pasty |
| **Colour:** | Whitish |
| · **Smell:** | Characteristic |
| · **pH-value:** | Not determined. |
| · **Change in condition** | |
| **Melting point/freezing point** | Not determined |
| **Initial boiling point and boiling range** | >200 °C |
| · **Flash point:** | 61 °C |
| · **Auto-ignition temperature** | 460 °C |
| · **Auto-ignition temperature** | Product is not selfigniting. |
| · **Explosive properties:** | Product is not explosive. |
| · **Steam pressure at 1732 °C:** | 13.5 hPa |
| · **Density at 20 °C** | 1.45 g/cm³ |
| · **Solubility in / Miscibility with** | |
| **Water:** | Not miscible or difficult to mix |
| · **Viscosity:** | |
| **dynamic:** | Not determined. |
| **kinematic:** | Not determined. |
| · **Other information** | |

No further relevant information available.

## 10 Stability and reactivity

| | |
|---|---|
| · **Reactivity** | No further relevant information available. |
| · **Chemical stability** | |
| · **Thermal decomposition / conditions to be avoided:** | No decomposition if used according to specifications. |
| · **Possibility of hazardous reactions** | No dangerous reactions known |
| · **Conditions to avoid** | No further relevant information available. |
| · **Incompatible materials:** | No further relevant information available. |
| · **Hazardous decomposition products:** | No dangerous decomposition products known |

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(Contd. on page 7)

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## * 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity**

| · **LD/LC50 values that are relevant for classification:** | | |
|---|---|---|
| **CAS: 1675-54-3 epoxide derivates** | | |
| Dermal | LD50 | 23000 mg/kg (rabbit) |
| **CAS: 9003-36-5 Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane** | | |
| Oral | LD50 | >2000 mg/kg (rat) |
| Dermal | LD50 | >2000 mg/kg (rabbit) |
| **CAS: 13463-67-7 titanium dioxide** | | |
| Oral | LD50 | >5000 mg/kg (rat) |
| Dermal | LD50 | >10000 mg/kg (rabbit) |
| Inhalative | LC50/4 h | >6.8 mg/l (rat) |

· **Primary irritant effect:**
· **Skin corrosion or irritation** Irritant for skin and mucous membranes.
· **Serious eye damage or eye irritation** No irritant effect.
· **Respiratory / skin sensitization** No sensitizing effect known.
· **Additional toxicological information:** The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Irritant
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** Carc. 2

## * 12 Ecological information

· **Toxicity**

| · **Aquatic toxicity:** | |
|---|---|
| **CAS: 1675-54-3 epoxide derivates** | |
| IC50 | >42.6 mg/l (Bak) |
| LC50/96h | 2 mg/l (Oncorhynchus mykiss) |
| EC50/48h | 1.8 mg/l (Daphnia magna) |
| ErC50/72h | 11 mg/l (Selenastrum capricornutum) |

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| CAS: 9003-36-5 Reaction mass of 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]dioxirane and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy}methyl)oxirane and 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]dioxirane | |
|---|---|
| LC50/96h | >100 mg/l (Daphnia magna) |
| EC50/96h | >100 mg/l (Leucidus idus) |

· **Persistence and degradability** No further relevant information available.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Toxic for fish
· **Additional ecological information:**
· **General notes:** Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

## 13 Disposal information

· **Waste treatment methods**
· **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

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## 14 Transportation information

· **UN-Number**
· **ADR, IMDG, IATA** UN3082

· **UN proper shipping name**
· **ADR, IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxide derivates)
· **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxide derivates), MARINE POLLUTANT

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| | |
|---|---|
| · **Transport hazard class(es)** | |
| · **ADR** | |
| · **Class** | 9 (M6) Miscellaneous dangerous substances and articles. |
| · **Label** | 9 |
| · **IMDG, IATA** | |
| · **Class** | 9 Miscellaneous dangerous substances and articles. |
| · **Label** | 9 |
| · **Packing group** | |
| · **ADR, IMDG, IATA** | III |
| · **Environmental hazards:** | |
| · **Marine pollutant:** | Yes<br>Symbol (fish and tree) |
| · **Special marking (ADR):** | Symbol (fish and tree) |
| · **Special marking (IATA):** | Symbol (fish and tree) |
| · **Special precautions for user** | Warning: Miscellaneous dangerous substances and articles. |
| · **Kemler Number:** | 90 |
| · **EMS Number:** | F-A,S-F |
| · **Stowage Category** | A |
| · **Transport in bulk according to Annex II of Marpol and the IBC Code** | Not applicable. |
| · **Transport/Additional information:** | |
| · **ADR** | |
| · **Limited quantities (LQ)** | 5L |
| · **Excepted quantities (EQ)** | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · **Transport category** | 3 |
| · **Tunnel restriction code** | (-) |
| · **IMDG** | |
| · **Limited quantities (LQ)** | 5L |
| · **Excepted quantities (EQ)** | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · **UN "Model Regulation":** | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXIDE DERIVATES), 9, III |



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## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

| · EHS reference list | |
|---|---|
| CAS: 1675-54-3 | epoxide derivates |

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** E2 Hazardous to the Aquatic Environment
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing data specification sheet:** Environment protection department.
· **Contact:**
· **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 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
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion or irritation – Category 2
Eye Irrit. 2: Serious eye damage or eye irritation – Category 2
Skin Sens. 1: Skin sensitization – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - chronic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - chronic hazard – Category 3

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