



BE SURE. BUILD SURE.

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

Printing date 14.04.2025

Version number 44



Revision: 14.04.2025

1 Identification of the hazardous chemical and of the supplier

- **Product identifier**
- **Trade name** **Konudur Robopox 10 - Komponente B**
- **Recommended use of the chemical and restrictions on use** *No further relevant information available.*
- **Application of the substance / the mixture** *Epoxy curing agent*
- **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*

2 Hazard identification

- **Classification of the substance or mixture**
*Acute Tox. 4 H302 Harmful if swallowed.
Skin Corr. 1 H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
Skin Sens. 1 H317 May cause allergic skin reaction.*
- **Label elements**
- **GHS label elements** *The product is classified and labelled according to the Globally Harmonised System (GHS).*
- **Hazard pictograms**

GHS05 GHS07
- **Signal word** *Danger*
- **Hazard-determining components of labelling:** *Polyoxypropylene triamine
1,3-Cyclohexanedimethanamine
Polymer with amino-functional groups
Tetraethylenepentamine
Hydrocarbons, C9-unsaturated, polymerised
Phenol, mono- and distyrolised
decarboxylating cashew nut shell liquid*

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- **Hazard statements**
 - H302 Harmful if swallowed.
 - H314 Causes severe skin burns and eye damage.
 - H317 May cause allergic skin reaction.
- **Precautionary statements**
 - P260 Do not breathe dusts or mists.
 - P261 Avoid breathing dust/fume/ gas/mist/vapours/ spray.
 - P303+P361+P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P310 Immediately call a POISON CENTER/doctor.
 - P321 Specific treatment (see on this label).
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition and information of the ingredients of the hazardous chemical

- **Chemical characterisation: Mixtures**
- **Description:** Mixture consisting of the following components.

Dangerous components:

CAS: 1317-65-3	Calcium carbonate	50-70%
CAS: 39423-51-3	Polyoxypropylene triamine Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312	≥3-<10%
	Polymer with amino-functional groups Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥3-<10%
CAS: 2579-20-6	1,3-Cyclohexanedimethanamine Skin Corr. 1, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Aquatic Chronic 3, H412	≥3-<5%
CAS: 71302-83-5	Hydrocarbons, C9-unsaturated, polymerised Asp. Haz., H304; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥2.5-<5%
CAS: 93281-16-4	Phenol, reaction products with divinylbenzene Aquatic Chronic 3, H412	≥2.5-<3%
CAS: 100-51-6	Benzyl alcohol Acute Tox. 4, H302; Acute Tox. 4, H332; Eye Irrit. 2, H319	<3%
CAS: 8007-24-7	decarboxylating cashew nut shell liquid Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥1-<2.5%
CAS: 90640-66-7	Tetraethylenepentamine Skin Corr. 1, H314; Eye Dam. 1, H318; Skin Sens. 1, H317	≥1-<1.5%
CAS: 69-72-7	Salicylic acid Repr. 2, H361; Eye Dam. 1, H318; Acute Tox. 4, H302	<0.5%

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· **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 equipment. Keep unprotected persons away.
- **Environmental precautions:** No special measures required.
- **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.
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. Ventilation measures are required in rooms without sufficient air exchange (e.g. closed rooms), because the occupational exposure limit values (see chapter 8) could be exceeded. This must be avoided. 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.*

· **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:** *None.*

· **Storage class** *8A*

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: 1317-65-3 Calcium carbonate

PEL (Malaysia) Long-term value: 10 mg/m³

· **DNELs**

CAS: 1317-65-3 Calcium carbonate

Oral DNEL 6.1 mg/kg bw/Tag (ArL)

Inhalative DNEL 10 mg/m³ (ArL)

CAS: 39423-51-3 Polyoxypropylene triamine

Inhalative DNEL 14 mg/m³ (ArL)

CAS: 2579-20-6 1,3-Cyclohexanedimethanamine

Inhalative DNEL 0.00947 mg/m³ (Workers)

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CAS: 100-51-6 Benzyl alcohol

Oral	DNEL	4 mg/kg bw/Tag (ArL) 20 mg/kg bw/Tag (Ark)
Dermal	DNEL	8 mg/kg bw/day (ArL) 40 mg/kg bw/day (Ark)
Inhalative	DNEL	22 mg/m ³ (ArL) 110 mg/m ³ (Ark)

· PNECs

CAS: 1317-65-3 Calcium carbonate

PNEC 100 mg/l (Sewage Treatment Plant)

CAS: 39423-51-3 Polyoxypropylene triamine

PNEC 10 mg/l (Sewage Treatment Plant)
0.00044 mg/l (Mew)
0.0044 mg/l (Freshwater)

PNEC 0.002 mg/kg dwt (Bod)
0.002 mg/kg dwt (Sediment)
0.02 mg/kg dwt (Fresh water sediment)

CAS: 2579-20-6 1,3-Cyclohexanedimethanamine

PNEC 0.003 mg/l (Mew)
PNEC 0.033 mg/l (Fresh water)

CAS: 100-51-6 Benzyl alcohol

PNEC 0.527 mg/l (Marine water sediment)
0.1 mg/l (Mew)
1 mg/l (Fresh water sediment)

PNEC 0.456 mg/kg dwt (Bod)
5.27 mg/kg dwt (Fresh water sediment)

· 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.

· 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

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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
Tight-fitting safety goggles.
Safety goggles.

Eye protection:

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.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Pasty
Colour: Black
Smell: Amine-like

pH-value at 20 °C: 12

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· Change in condition	
Melting point/freezing point	Not determined
Initial boiling point and boiling range	Not determined

· **Flash point:** >61 °C

· **Ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive.

· **Steam pressure:** Not determined.

· **Density at 20 °C** 1.75 g/cm³

· **Solubility in / Miscibility with Water:** Partly miscible

· Viscosity:	
dynamic at 20 °C:	150000 mPas
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

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity**

· **LD/LC50 values that are relevant for classification:**

CAS: 1317-65-3 Calcium carbonate

Oral LD50 >2000 mg/kg (rat)

Dermal LD50 >2000 mg/kg (rat)

CAS: 39423-51-3 Polyoxypropylene triamine

Oral LD50 550 mg/kg (rat)

Dermal LD50 >1000 mg/kg (rat)

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CAS: 2579-20-6 1,3-Cyclohexanedimethanamine

Oral	LD50	700 mg/kg (rat)
Dermal	LD50	1700 mg/kg (rat)

CAS: 93281-16-4 Phenol, reaction products with divinylbenzene

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rat)

CAS: 100-51-6 Benzyl alcohol

Oral	LD50	1230 mg/kg (rat)
	NOAEL 2nd year study	200 mg/kg (mouse) 200 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalative	LC50/4 h	>4178 mg/l (rat)

CAS: 69-72-7 Salicylic acid

Oral	LD50	891 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)

· **Primary irritant effect:**

· **Skin corrosion or irritation** Caustic effect on skin and mucous membranes.

· **Serious eye damage or eye irritation** Strong caustic effect.

· **Respiratory / skin sensitization** Sensitization possible by skin contact.

· **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:

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

CAS: 1317-65-3 Calcium carbonate

EC50/72h	>14 mg/l (Desmodesmus subspicatus)
LC50/96h	>10000 mg/l (Oncorhynchus mykiss)
LC50/48h	>1000 mg/l (Daphnia magna)
EC50/48h	>1000 mg/l (Daphnia magna)

CAS: 39423-51-3 Polyoxypropylene triamine

LC50/96h	>100 mg/l (Oncorhynchus mykiss)
EC50/48h	13 mg/l (Daphnia magna)

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ErC50/72h	4.4 mg/l (algae)
CAS: 2579-20-6 1,3-Cyclohexanedimethanamine	
EC50/24h	90 mg/l (<i>Pseudokirchneriella subcapitata</i>)
EC50	90 mg/l (<i>Pseudomonas putida</i>)
LC50/48h	130 mg/l (<i>Leucidus idus</i>)
CAS: 100-51-6 Benzyl alcohol	
IC50/72h	700 mg/l (algae)
LC50/96h	460 mg/l (<i>Pimephales promelas</i>)
	10 mg/l (<i>Lepomis macrochirus</i>)

- **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.
- **Additional ecological information:**
- **General notes:** 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.

14 Transportation information

- **UN-Number**
- **ADR, IMDG, IATA** UN2735
- **UN proper shipping name**
- **ADR, IMDG, IATA** AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-Cyclohexanedimethanamine, Tetraethylenepentamine)
- **Transport hazard class(es)**
- **ADR**
- **Class** 8 (C7) Corrosive substances.

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· Label	8
· IMDG, IATA	
· Class	8 Corrosive substances.
· Label	8
· Packing group	
· ADR, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances.
· Kemler Number:	80
· EMS Number:	F-A,S-B
· Segregation groups	(SGG18) Alkalis
· Stowage Category	A
· Segregation Code	SG35 Stow "separated from" SGG1-acids
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (1, 3-CYCLOHEXANEDIMETHANAMINE, TETRAETHYLENEPENTAMINE), 8, II

15 Regulatory information

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

· **EHS reference list**

CAS: 100-51-6 Benzyl alcohol

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I**

None of the ingredients is listed.

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· **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)

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 - oral – Category 4

Skin Corr. 1: Skin corrosion or irritation – Category 1

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

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

Eye Irrit. 2: Serious eye damage or eye irritation – Category 2

Skin Sens. 1: Skin sensitization – Category 1

Repr. 2: Reproductive toxicity – Category 2

Asp. Haz.: Aspiration hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - chronic hazard – Category 3

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

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