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

Printing date 09.12.2024 Version number 36 Revision: 09.12.2024

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

· Product identifier

· Trade name MC-CarboSolid 1280 - Komponente B

Recommended use of the chemical and restrictions on

use · Application of the substance No further relevant information available.

/ the mixture Epoxy coating

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

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.

STOT RE 2 H373 May cause damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

Label elements

· GHS label elements The product is classified and labelled according to the Globally

Harmonised System (GHS).

· Hazard pictograms







GHS05 GHS07 GHS08

· Signal word

Danger

· Hazard-determining

components of labelling:

Isophorone diamine

2-methylpentane-1,5-diamine

crystalline silica Amine polymer

4,4'-methylenebis(cyclohexylamine)

Fettsäuren, C18- unges., Dimere, Reaktionsprodukte mit N,N-

Dimethyl-1,3-propanediamin und 1,3-Propanediamin

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· Hazard statements H314 Causes severe skin burns and eye damage.

H317 May cause allergic skin reaction.

H373 May cause damage to the lung through prolonged or

repeated exposure. Route of exposure: Inhalation.

• **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.

Immediately call a POISON CENTER/doctor.

P310 Immediately call a POISON CENTER/d 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.

	Amine polymer	≥3-<10%
	Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317	
CAS: 2855-13-2	Isophorone diamine Skin Corr. 1, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥5-<10%
CAS: 9046-10-0	Polyoxypropylenediamine Skin Corr. 1, H314; Eye Dam. 1, H318; Aquatic Chronic 3, H412	≥5-<10%
	Amine polymer Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥3-<10%
CAS: 15520-10-2	2-methylpentane-1,5-diamine Skin Corr. 1, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; STOT SE 3, H335	≥3-<5%
CAS: 14808-60-7	crystalline silica STOT RE 1, H372	<5%
CAS: 1761-71-3	4,4'-methylenebis(cyclohexylamine) STOT RE 2, H373; Skin Corr. 1, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1, H317	≥3-<5%
CAS: 39423-51-3	Polyoxypropylene triamine Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312	≥1-<2.5%

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	(0	Contd. of page 2)
CAS: 69-72-7	salicylic acid	<1%
	Repr. 2, H361; Eye Dam. 1, H318; Acute Tox. 4, H302	
CAS: 162627-17-0	AS: 162627-17-0 Fettsäuren, C18- unges., Dimere, Reaktionsprodukte mit N,N- ≥0.1-<0.5 Dimethyl-1,3-propanediamin und 1,3-Propanediamin	
	Skin Sens. 1, H317	
Additional information For the wording of the listed hazard phrases refer to section 16		ection 16

#### 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

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** Not required.

Environmental precautions: No special measures required.

Methods and material for

containment and cleaning up: Collect mechanically.

Reference to other sections See Section 7 for information on safe handling

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See Section 8 for information on personal protection equipment. See Section 13 for information on disposal.

#### 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: Keep container tightly closed in a well-ventilated place.

· 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: 14808-60-7 crystalline silica

PEL (Malaysia) Long-term value: 0.1\* mg/m³

\*Pecahan ternafaskan

· DNELs

CAS: 2855-13-2 Isophorone diamine

Oral DNEL 0.526 mg/kg bw/Tag (ArL)

Inhalative DNEL 20.1 mg/m³ (ArL)

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040	2040 40 0 D 1	(Contd. of pa
	9046-10-0 Polyoxypropylenediamine	
Oral	DNEL 0.04 mg/kg bw/Tag (ArL)	
Derma		
	15520-10-2 2-methylpentane-1,5-diamine	
Derma	3 3 7 7	
Inhalati	ive DNEL 0.25 mg/m³ (ArL)	
	0.5 mg/m³ (Ark)	
	1761-71-3 4,4'-methylenebis(cyclohexylamine)	
Oral	DNEL 0.06 mg/kg bw/Tag (ArL)	
Dermai	3 3 7 7	
	ive DNEL 1 mg/m³ (ArL)	
	39423-51-3 Polyoxypropylene triamine	
Inhalati	ive DNEL 14 mg/m³ (ArL)	
PNECS	3	
CAS: 2	2855-13-2 Isophorone diamine	
PNEC	0.006 mg/l (Mew)	
	0.06 mg/l (Freshwater)	
PNEC	0.578 mg/kg dwt (Sediment)	
	5.784 mg/kg dwt (Fresh water sediment)	
CAS: 9	9046-10-0 Polyoxypropylenediamine	
PNEC	7.5 mg/l (Sewage Treatment Plant)	
	0.015 mg/l (Fresh water)	
PNEC	0.0176 mg/kg dwt (Bod)	
	0.125 mg/kg dwt (Sediment)	
	0.132 mg/kg dwt (Fresh water sediment)	
CAS: 1	15520-10-2 2-methylpentane-1,5-diamine	
PNEC	0.042 mg/l (Mew)	
	0.42 mg/l (Freshwater)	
CAS: 1	1761-71-3 4,4'-methylenebis(cyclohexylamine)	
	0.08 mg/l (Fresh water)	
	3.2 mg/l (Kla)	
	13.7 mg/l (Mew)	
PNEC	27.2 mg/kg dwt (Bod)	
	13.7 mg/kg dwt (Sediment)	
	137 mg/kg dwt (Fresh water sediment)	
CAS: 3	39423-51-3 Polyoxypropylene triamine	
	10 mg/l (Sewage Treatment Plant)	
	0.00044 mg/l (Mew)	
	0.0044 mg/l (Freshwater)	

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PNEC 0.002 mg/kg dwt (Bod)

0.002 mg/kg dwt (Sediment)

0.02 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

• 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

• Eye protection: Tight-fitting safety goggles.

Safety goggles.

Body protection: Protective clothing

Suitable protective clothing should be worn when working with

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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: light yellow · Smell: Amine-like

· pH-value at 20 °C: 12

· Change in condition

Melting point/freezing point Not determined Initial boiling point and boiling range 2230 °C

≥61 °C · Flash point: >370 °C · Auto-ignition temperature

Product is not selfigniting. · Auto-ignition temperature · Explosive properties: Product is not explosive.

· Steam pressure at 1732 °C: 13.5 hPa

· Density at 20 °C 1.55 g/cm<sup>3</sup>

· Solubility in / Miscibility with

Water: Partly miscible

· Viscosity:

250000 mPas dynamic at 20 °C: 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:

· Possibility of hazardous

reactions · Conditions to avoid No decomposition if used according to specifications.

No dangerous reactions known

No further relevant information available.

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· Incompatible materials:

No further relevant information available.

· Hazardous decomposition

products: No dangerous decomposition products known

#### 11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity

· Acute tox		
LD/LC50	values tha	nt are relevant for classification:
CAS: 285	5-13-2 Iso	phorone diamine
Oral	LD50	1030 mg/kg (ATE)
		1030 mg/kg (rat)
	NOAEL	250 mg/kg (rat)
Dermal	LD50	1840 mg/kg (rabbit)
		>2000 mg/kg (rat)
		1840 mg/kg (rabbit)
CAS: 904	6-10-0 Po	lyoxypropylenediamine
Oral	LD50	2855 mg/kg (Rat)
		2885 mg/kg (rat)
Dermal	LD50	2980 mg/kg (Kan)
		2980 mg/kg (rabbit)
CAS: 155	20-10-2 2-	methylpentane-1,5-diamine
Oral	LD50	1170 mg/kg (rat)
Dermal	LD50	1870 mg/kg (rabbit)
Inhalative	LC50/4 h	19.6 mg/l (rat)
CAS: 176	1-71-3 4,4	-methylenebis(cyclohexylamine)
Oral	LD50	380 mg/kg (rat)
Dermal	LD50	2110 mg/kg (rat)
CAS: 394	23-51-3 P	olyoxypropylene triamine
Oral	LD50	550 mg/kg (rat)
Dermal	LD50	>1000 mg/kg (rat)
CAS: 69-	72-7 salicy	lic acid
Oral	LD50	891 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
· Primary i	rritant off	not:

· Primary irritant effect:

· **Skin corrosion or irritation** Irritant for skin and mucous membranes.

· Serious eye damage or eye

irritation Strong caustic effect.

· Respiratory / skin

**sensitization** Sensitization possible by skin contact.

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· Additional toxicological information:

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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

#### 12 Ecological information

Toxicity	
Aquatic to	•
	-13-2 Isophorone diamine
LC50/96h	110 mg/l (fish)
	110 mg/l (Leucidus idus)
EC50	1120 mg/l (Pseudomonas putida)
EC50/48h	23 mg/l (daphnia)
	23 mg/l (Daphnia magna)
NOEC	1.5 mg/l (Desmodesmus subspicatus)
	3 mg/l (Daphnia magna)
ErC50/72h	>50 mg/l (Desmodesmus subspicatus)
	>50 mg/l (algae)
CAS: 9046	-10-0 Polyoxypropylenediamine
EC50/72h	15 mg/l (algae)
LC50/96h	>15 mg/l (fish)
EC50/48h	80 mg/l (daphnia)
CAS: 1552	0-10-2 2-methylpentane-1,5-diamine
EC50/72h	>100 mg/l (algae)
EC50	1825 mg/l (fish)
EC50/48h	19.8 mg/l (Daphnia magna)
CAS: 1761	-71-3 4,4'-methylenebis(cyclohexylamine)
LC50/96h	>100 mg/l (Leucidus idus)
EC50/48h	6.84 mg/l (Daphnia magna)
NOEC	4 mg/l (Daphnia magna)
ErC50/72h	141.2 mg/l (Desmodesmus subspicatus)
CAS: 3942	3-51-3 Polyoxypropylene triamine
LC50/96h	>100 mg/l (Oncorhynchus mykiss)
EC50/48h	13 mg/l (Daphnia magna)
ErC50/72h	4.4 mg/l (algae)

- 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.

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· 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. (2-

methylpentane-1,5-diamine, 4,4'-

methylenebis(cyclohexylamine))

· Transport hazard class(es)

· ADR

· Class 8 (C7) Corrosive substances.

· Label 8

· IMDG, IATA

· Class 8 Corrosive substances.

· Label 8

Packing group

· ADR, IMDG, IATA

· 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

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Segregation Code	SG35 Stow "separated from" SGG1-acids
Transport in bulk according to Annex I Marpol and the IBC Code	<b>l of</b> 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 (ÉQ)	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. (
	METHYLPENTANE-1,5-DIAMINE, 4,4
	METHYLENEBIS(CYCLOHEXYLAMINE)), 8, II

#### 15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · EHS reference list

CAS: 2855-13-2 Isophorone diamine

- · Directive 2012/18/EU
- · Named dangerous

substances - ANNEX I None of the ingredients is listed.

· 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)

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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

Skin Sens. 1: Skin sensitization – Category 1 Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - chronic hazard –
Category 3

\* Data compared to the previous version altered.

N 43.