



BE SURE. BUILD SURE.

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

Printing date 15.04.2025

Version number 43

Revision: 15.04.2025

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

- **Product identifier**
- **Trade name** ombran flex - Komponente B
- **Recommended use of the chemical and restrictions on use** No further relevant information available.
- **Application of the substance / the mixture** Polyurethane-sealant
- **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 Irrit. 2 H315 Causes skin irritation.
  - Eye Dam. 1 H318 Causes serious eye damage.
  - Resp. Sens. 1 H334 May cause allergic or asthma symptoms or breathing difficulties if inhaled.
  - Skin Sens. 1 H317 May cause allergic skin reaction.
  - Carc. 2 H351 Suspected of causing cancer. Route of exposure: Inhalation.
  - Lact. H362 May cause harm to breast-fed children.
  - STOT SE 3 H335 May cause respiratory irritation.
  - STOT RE 2 H373 May cause damage to the lung through prolonged or repeated exposure.
  - Aquatic Acute 1 H400 Very toxic to aquatic life.
  - Aquatic Chronic 1 H410 Very 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**



GHS05 GHS07 GHS08 GHS09

- **Signal word**

Danger

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**Hazard-determining components of labelling:**

Diphenylmethane diisocyanate, isomers and homologues  
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane  
diphenylmethane-4,4'-di-isocyanate

**Hazard statements**

Diphenylmethane-2,4'-diisocyanate  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H334 May cause allergic or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause allergic skin reaction.  
H351 Suspected of causing cancer. Route of exposure: Inhalation.  
H362 May cause harm to breast-fed children.  
H335 May cause respiratory irritation.  
H373 May cause damage to the lung through prolonged or repeated exposure.

**Precautionary statements**

H410 Very toxic to aquatic life with long lasting effects.  
P260 Do not breathe dusts or mists.  
P263 Avoid contact during pregnancy/ while nursing.  
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).  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**Other hazards**

**Results of PBT and vPvB assessment**

**PBT:**

CAS: 85535-85-9 chloroalkanes (C=14-17)

**vPvB:**

CAS: 85535-85-9 chloroalkanes (C=14-17)

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

**Chemical characterisation: Mixtures**

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

**Dangerous components:**

CAS: 85535-85-9	chloroalkanes (C=14-17) Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Lact., H362 PBT; vPvB	30-60%
CAS: 9016-87-9	Diphenylmethane diisocyanate, isomers and homologues 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	30-60%

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CAS: 2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane Eye Dam. 1, H318	≥3-<10%
CAS: 101-68-8	diphenylmethane-4,4'-di-isocyanate 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	≥1-<1.5%
CAS: 5873-54-1	Diphenylmethane-2,4'-diisocyanate 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	≥0.1-<1%

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

### 4 First-aid measures

· **Description of first aid measures**

- **General information** Remove, decontaminate and dispose of soiled, soaked clothing and shoes immediately.
- **After inhalation** Remove person to fresh air, keep warm, allow to rest; if breathing is difficult, seek medical attention.
- **After skin contact** In case of contact with skin, preferably wash with polyethylene glycol-based cleaner or clean with plenty of warm water and soap. Consult a doctor in case of skin reactions.
- **After eye contact** Rinse the eyes with open eyelids for a sufficiently long time (at least 10 minutes) with water that is as lukewarm as possible. Consult an ophthalmologist.
- **After swallowing** Do NOT induce vomiting. Rinse mouth with water. Medical attention required.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** Information for the doctor: The product irritates the respiratory tract and is a potential trigger for skin and respiratory sensitisation. Treatment of acute irritation or bronchial constriction is primarily symptomatic. Depending on the extent of exposure and the symptoms, prolonged medical treatment may be necessary.
- **Indication of any immediate medical attention and special treatment needed** No information available.

### 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.

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- **Advice for firefighters**
- **Protective equipment:** Put on breathing apparatus.

#### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Prevent material from reaching sewage system, holes and cellars.
- **Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.  
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.

#### 7 Handling and storage

- **Handling**
- **Precautions for safe handling** Ensure sufficient air exchange and/or extraction in the work areas.  
Air extraction is required for spray application.  
For solid products: Avoid dust formation and dust deposits.  
Air limit values mentioned in section 8 must be monitored.  
At workplaces where isocyanate aerosols and/or vapours can occur in higher concentrations, targeted air extraction must be used to prevent the occupational hygiene limit value from being exceeded. The air must be moved away from people.  
For products containing solvents: Explosion protection required.  
The personal protective measures described in section 8 must be observed. The protective measures required when handling isocyanates must be observed. Avoid contact with skin and eyes and inhalation of vapours.  
Keep away from food and beverages. Wash hands before breaks and at the end of work and apply skin protection ointment. Store work clothes separately. Remove soiled, soaked clothing immediately.
- **Conditions for safe storage, including any incompatibilities** Keep container dry and tightly closed. Further information on the storage conditions that must be observed for quality assurance reasons can be found in our technical data sheet.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store only in the original container.
- **Further information about storage conditions:** None.

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- **Storage class** 10
- **Specific end use(s)** No further relevant information available.

## 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: 101-68-8 diphenylmethane-4,4'-di-isocyanate**

PEL (Malaysia) Long-term value: 0.051 mg/m<sup>3</sup>, 0.005 ppm

### · DNELs

**CAS: 9016-87-9 Diphenylmethane diisocyanate, isomers and homologues**

Inhalative DNEL 0.05 mg/m<sup>3</sup> (ArL)

**CAS: 101-68-8 diphenylmethane-4,4'-di-isocyanate**

Dermal DNEL 50 mg/kg bw/day (Ark)

Inhalative DNEL 0.05 mg/m<sup>3</sup> (ArL)

**CAS: 5873-54-1 Diphenylmethane-2,4'-diisocyanate**

Inhalative DNEL 0.05 mg/m<sup>3</sup> (ArL)

### · PNECs

**CAS: 9016-87-9 Diphenylmethane diisocyanate, isomers and homologues**

PNEC 1 mg/l (Sewage Treatment Plant)

0.1 mg/l (Mew)

1 mg/l (Freshwater)

PNEC 1 mg/kg dwt (Bod)

**CAS: 101-68-8 diphenylmethane-4,4'-di-isocyanate**

PNEC 1 mg/l (Sewage Treatment Plant)

0.1 mg/l (Mew)

1 mg/l (Freshwater)

PNEC 1 mg/kg dwt (Bod)

**CAS: 5873-54-1 Diphenylmethane-2,4'-diisocyanate**

PNEC 1 mg/l (Sewage Treatment Plant)

0.1 mg/l (Mew)

1 mg/l (Freshwater)

PNEC 1 mg/kg dwt (Bod)

- **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.

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· **Breathing equipment:**

Wash hands before breaks and at the end of work.  
Avoid contact with eyes and skin.

Respiratory protection required at insufficiently ventilated workplaces and when working with splashes. Fresh air masks or combination filters A2-P2 (EN529) are recommended for short-term work.

If applicable, further recommendations for respiratory protection can be found in the appendix.

In case of hypersensitivity of the respiratory tract (asthma, chronic bronchitis), handling of the product is not recommended.

· **Protection of hands:**

Suitable materials for protective gloves; EN 374:

Butyl rubber, nitrile rubber, chloroprene rubber (neoprene).

Note: suitable materials that provide sufficient protection for industrial cleaning with aprotic polar solvents (according to IUPAC definition): butyl rubber.

In case of prolonged or frequently repeated contact, a glove with a protection class of 5 or higher is recommended (breakthrough time greater than 240 minutes according to EN374). For short-term contact, a glove with a protection class of 3 or higher is recommended (breakthrough time greater than 60 minutes according to EN374).

The thickness of the material is not the only criterion for the level of protection of a glove against a chemical substance. The protective effect also depends to a large extent on the type of glove material. Depending on the type and material, the thickness must be more than 0.35 mm to ensure adequate protection in the event of prolonged and frequent contact. Exceptions to this rule are multi-layer gloves, which guarantee sufficient protection even with a thickness of less than 0.35 mm during prolonged wear. Other glove materials with a thickness of less than 0.35 mm only provide sufficient protection for short periods of wear.

For solvent-free products:

Example:

Polychloroprene - CR: thickness  $\geq 0.5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Nitrile rubber - NBR: thickness  $\geq 0.35\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Butyl rubber - IIR: thickness  $\geq 0.5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Fluoro rubber - FKM: thickness  $\geq 0.4\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

· **Material of gloves**

Recommendation: Dispose of contaminated gloves.

Polychloroprene - CR

Nitrile rubber - NBR

Butyl rubber - IIR

Fluoro rubber - FKM

· **Penetration time of glove material**

Polychloroprene - CR: thickness  $\geq 0.5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

Nitrile rubber - NBR: thickness  $\geq 0.35\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .

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Butyl rubber - IIR: thickness  $\geq 0.5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .  
Fluoro rubber - FKM: Thickness  $\geq 0.4\text{mm}$ ; Breakthrough time  $\geq 480\text{min}$ .

- **Eye protection:**
- **Body protection:**

Safety goggles with side protection in accordance with EN 166.  
Use chemical-resistant protective clothing.

In case of hypersensitivity of the skin, handling the product is not recommended.

### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Fluid
Colour:	Black
Smell:	Characteristic

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point	Not determined
	Not applicable
Initial boiling point and boiling range	190 °C

· **Flash point:** 110 °C

· **Auto-ignition temperature** 420 °C

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

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

· **Steam pressure:** Not determined.

· **Density at 20 °C** 1.19 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix

· **Viscosity:**

dynamic at 20 °C:	1276 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**

Reacts with amines

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- **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: 9016-87-9 Diphenylmethane diisocyanate, isomers and homologues**

Oral	LD50	>10000 mg/kg (Rat)
Dermal	LD50	>5000 mg/kg (Rab)
Inhalative	LC50/4 h	~450 mg/l (Rat)

**CAS: 2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane**

Oral	LD50	8030 mg/kg (rat)
Dermal	LD50	4248 mg/kg (rabbit)

**CAS: 101-68-8 diphenylmethane-4,4'-di-isocyanate**

Oral	LD50	>10000 mg/kg (rat)
Dermal	LD50	>9400 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion or irritation** Irritant for skin and mucous membranes.
- **Serious eye damage or eye irritation** Irritant effect.
- **Respiratory / skin sensitization** Sensitization possible by inhalation.  
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:  
Harmful  
Irritant
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** Carc. 2, Lact.

**12 Ecological information**

- **Toxicity**

· **Aquatic toxicity:**

**CAS: 2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane**

LC50/96h	55 mg/l (Cyp)
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EC50/48h	473 mg/l (Daphnia magna)
ErC50/72h	255 mg/l (Scenedesmus subspicatus)
<b>CAS: 101-68-8 diphenylmethane-4,4'-di-isocyanate</b>	
EC50/24h	>1000 mg/l (Daphnia magna)
LC50/96h	>1000 mg/l (Brachydanio rerio)
NOEC	>1000 mg/l (Eisenia foetida)
	>10 mg/l (Daphnia magna)

- **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**

· <b>PBT:</b>	
CAS: 85535-85-9	chloroalkanes (C=14-17)

· <b>vPvB:</b>	
CAS: 85535-85-9	chloroalkanes (C=14-17)

- **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:** Non contaminated packagings can be used for recycling.

### 14 Transportation information

· <b>UN-Number</b>	
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>UN proper shipping name</b>	
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>Transport hazard class(es)</b>	
· <b>ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	Void

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· <b>Packing group</b>	
· <b>ADR, IMDG, IATA</b>	Void
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	Void

### 15 Regulatory information

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

- **EHS reference list**

CAS: 85535-85-9	chloroalkanes (C=14-17)
CAS: 101-68-8	diphenylmethane-4,4'-di-isocyanate
CAS: 5873-54-1	Diphenylmethane-2,4'-diisocyanate

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

- **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

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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 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

Resp. Sens. 1: Respiratory sensitization – Category 1

Skin Sens. 1: Skin sensitization – Category 1

Carc. 2: Carcinogenicity – Category 2

Lact.: Reproductive toxicity - effect on or via lactation

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - chronic hazard – Category 1

· \* Data compared to the  
previous version altered.

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