



BE SURE. BUILD SURE.

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## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 22.09.2023

Version number 34

Revision: 22.09.2023

### 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name** ombran flex - Komponente B
- **Relevant identified uses of the substance or mixture and uses advised against** *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 Hazards identification

- **Classification of the substance or mixture**
  - Acute Tox. 5 H333 May be harmful if inhaled.*
  - Skin Irrit. 2 H315 Causes skin irritation.*
  - Eye Dam. 1 H318 Causes serious eye damage.*
  - Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.*
  - Skin Sens. 1 H317 May cause an 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

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- **Signal word** Danger
- **Hazard-determining components of labelling:** *diphenylmethanediisocyanate, isomeres and homologues [3-(2,3-epoxypropoxy)propyl]trimethoxysilane diphenylmethane-4,4'-di-isocyanate diphenylmethane-2,4'-diisocyanate*
- **Hazard statements** *May be harmful if inhaled. Causes skin irritation. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer. Route of exposure: Inhalation. May cause harm to breast-fed children. May cause respiratory irritation. May cause damage to the lung through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.*
- **Precautionary statements** *Do not breathe dusts or mists. Avoid contact during pregnancy/while nursing. 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. Specific treatment (see on this label). Take off contaminated clothing and wash it before reuse. Store in a well-ventilated place. Keep container tightly closed.*
- **Other hazards**
- **Results of PBT and vPvB assessment**

· **PBT:**

85535-85-9	chloroalkanes (C=14-17)
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· **vPvB:**

85535-85-9	chloroalkanes (C=14-17)
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**3 Composition/information on ingredients**

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

· **Dangerous components:**

85535-85-9	chloroalkanes (C=14-17) <i>Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Lact., H362 PBT; vPvB</i>	30-60%
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues <i>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</i>	30-60%

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2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane Eye Dam. 1, H318; Acute Tox. 5, H313	≥3-<10%
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%
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%

· **SVHC**

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

· **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** Instantly remove any clothing soiled by the product.  
Take affected persons into the open air.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.  
Seek medical treatment.
- **After swallowing** Call a doctor immediately.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**5 Firefighting 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:** Put on breathing apparatus.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Not required.

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- **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 good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class** 10
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/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:

#### 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

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

PEL (USA)	Ceiling limit: 0.2 mg/m <sup>3</sup> , 0.02 ppm
REL (USA)	Long-term value: 0.05 mg/m <sup>3</sup> , 0.005 ppm Ceiling limit: 0.2* mg/m <sup>3</sup> , 0.02* ppm *10-min

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TLV (USA)	Long-term value: 0.005 ppm
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

**5873-54-1 diphenylmethane-2,4'-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
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**· DNELs**

**9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

Inhalative	DNEL	0.05 mg/m <sup>3</sup> (ArL)
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**101-68-8 diphenylmethane-4,4'-di-isocyanante**

Dermal	DNEL	50 mg/kg bw/day (Ark)
Inhalative	DNEL	0.05 mg/m <sup>3</sup> (ArL)

**5873-54-1 diphenylmethane-2,4'-diisocyanate**

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

**9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

PNEC	1 mg/l (Sewage Treatment Plant)
	0.1 mg/l (Mew)
	1 mg/l (Suw)
PNEC	1 mg/kg dwt (Bod)

**101-68-8 diphenylmethane-4,4'-di-isocyanante**

PNEC	1 mg/l (Sewage Treatment Plant)
	0.1 mg/l (Mew)
	1 mg/l (Suw)
PNEC	1 mg/kg dwt (Bod)

**5873-54-1 diphenylmethane-2,4'-diisocyanate**

PNEC	1 mg/l (Sewage Treatment Plant)
	0.1 mg/l (Mew)
	1 mg/l (Suw)
PNEC	1 mg/kg dwt (Bod)

**· Ingredients with biological limit values:**

**101-68-8 diphenylmethane-4,4'-di-isocyanante**

BMGV (Great Britain)	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine
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#### 5873-54-1 diphenylmethane-2,4'-diisocyanate

BMGV (Great Britain)

1 µmol creatinine/mol

Medium: urine

Sampling time: At the end of the period of exposure

Parameter: isocyanate-derived diamine

- **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 foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.
- **Breathing equipment:** Respiratory protection is required at inadequately ventilated workplaces and during spray processing. Fresh air masks or combination filters A2-P2 are recommended for short-term work.
- **Protection of hands:** Conditionally suitable materials for protective gloves; EN 374-3: Nitrile rubber - NBR: Thickness  $\geq 0.35\text{mm}$ . Only suitable for splash protection. Only suitable for short-term exposure. In case of contamination, the protective gloves must be changed immediately.
- **Material of gloves** Nitrile rubber, NBR
- **Penetration time of glove material** The exact breakthrough time must be obtained from the protective glove manufacturer and must be observed.
- **Eye protection:** Safety glasses  
Tightly sealed safety glasses.
- **Body protection:** Protective work clothing.

### 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

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· <b>Auto-ignition temperature:</b>	420 °C
· <b>Self-inflammability:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product is not explosive.
· <b>Steam pressure:</b>	Not determined.
· <b>Density at 20 °C</b>	1.19 g/cm <sup>3</sup>
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix
· <b>Viscosity:</b> dynamic at 20 °C: kinematic:	1276 mPas Not determined.
· <b>Other information</b>	

No further relevant information available.

**10 Stability and reactivity**

· <b>Reactivity</b>	No further relevant information available.
· <b>Chemical stability</b>	
· <b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
· <b>Possibility of hazardous reactions</b>	Reacts with amines
· <b>Conditions to avoid</b>	No further relevant information available.
· <b>Incompatible materials:</b>	No further relevant information available.
· <b>Hazardous decomposition products:</b>	No dangerous decomposition products known

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity**

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

**9016-87-9 diphenylmethanediisocyanate, isomeres and homologues**

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

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

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

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#### 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/irritation** Irritant for skin and mucous membranes.
- **Serious eye damage/irritation** Irritant effect.
- **Respiratory or skin sensitisation** 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 (carcinogenity, mutagenicity and toxicity for reproduction)** Carc. 2, Lact.

## 12 Ecological information

### · Toxicity

#### · Aquatic toxicity:

#### 2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane

LC50/96h	55 mg/l (Cyp)
EC50/48h	473 mg/l (Daphnia magna)
ErC50/72h	255 mg/l (Scenedesmus subspicatus)

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

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**

#### · PBT:

85535-85-9	chloroalkanes (C=14-17)
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· **vPvB:**

85535-85-9 | chloroalkanes (C=14-17)

· **Other adverse effects**                      *No further relevant information available.*

### 13 Disposal considerations

· **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 Transport information

· **UN-Number**

· **ADR, ADN, IMDG, IATA**

*Void*

· **UN proper shipping name**

· **ADR, ADN, IMDG, IATA**

*Void*

· **Transport hazard class(es)**

· **ADR, ADN, IMDG, IATA**

· **Class**

*Void*

· **Packing group**

· **ADR, IMDG, IATA**

*Void*

· **Environmental hazards:**

· **Marine pollutant:**

*No*

· **Special precautions for user**

*Not applicable.*

· **Transport in bulk according to Annex II of  
Marpol and the IBC Code**

*Not applicable.*

· **UN "Model Regulation":**

*Void*

### 15 Regulatory information

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

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I**

*None of the ingredients is listed.*

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- **National regulations**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**

85535-85-9	chloroalkanes (C=14-17)
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- **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
  - 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
  - SVHC: Substances of Very High Concern
  - vPvB: very Persistent and very Bioaccumulative
  - Acute Tox. 5: Acute toxicity – Category 5
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
  - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  - Resp. Sens. 1: Respiratory sensitisation – Category 1
  - Skin Sens. 1: Skin sensitisation – Category 1
  - Carc. 2: Carcinogenicity – Category 2
  - Lact.: Reproductive toxicity – effects 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 aquatic hazard – Category 1
  - Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- **\* Data compared to the previous version altered.**