



BE SURE. BUILD SURE.

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

Printing date 08.09.2024



Version number 23

Revision: 04.09.2024

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

- **Product identifier**
- **Trade name** **MC-DUR 2496 CTP Tunnel - Komponente B**
- **Recommended use of the chemical and restrictions on use** *No further relevant information available.*
- **Application of the substance / the mixture** *Polyurethane resin  
Hardening agent/ 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**  
*Flam. Liq. 3 H226 Flammable liquid and vapour.  
Skin Sens. 1 H317 May cause allergic skin reaction.  
STOT SE 3 H335 May cause respiratory irritation.*
- **Label elements**
- **GHS label elements** *The product is classified and labelled according to the Globally Harmonised System (GHS).*
- **Hazard pictograms**  
  
GHS02 GHS07
- **Signal word** *Warning*
- **Hazard-determining components of labelling:** *Aliphatisches Polyisocyanat*
- **Hazard statements** *H226 Flammable liquid and vapour.  
H317 May cause allergic skin reaction.  
H335 May cause respiratory irritation.*
- **Precautionary statements** *P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking.*

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- P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
- P261 Avoid breathing dust/fume/ gas/mist/vapours/ spray.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.

- **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:** Active substance with propellant.  
Mixture consisting of the following components.

· **Dangerous components:**

CAS: 28182-81-2	Aliphatisches Polyisocyanat Skin Sens. 1, H317; STOT SE 3, H335	60-80%
CAS: 123-86-4	n-butyl acetate Flam. Liq. 3, H226; STOT SE 3, H336	≥10-<20%
CAS: 108-65-6	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226; STOT SE 3, H336	≥10-<20%
CAS: 108-32-7	Propylene carbonate Eye Irrit. 2, H319	<2.5%

- **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 soiled, soaked clothing 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, wash carefully with plenty of soap and water. 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.

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- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed**
- **Indication of any immediate medical attention and special treatment needed**

*Advice for the doctor: Elementary aid, decontamination, symptomatic treatment.*

*Therapeutic measures: No information available.*

#### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
- **Special hazards arising from the substance or mixture**

*Use fire fighting measures that suit the environment.*

*Can be released in case of fire  
Carbon monoxide (CO)  
Nitrogen oxides (NOx)  
Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:  
Hydrogen cyanide (HCN)*

- **Advice for firefighters**
- **Protective equipment:**

*Wear self-contained breathing apparatus.*

#### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

*Ensure adequate ventilation  
Use breathing protection against the effects of fumes/dust/aerosol.  
Prevent material from reaching sewage system, holes and cellars.*

- **Environmental precautions:**
- **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*

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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.

· **Information about protection against explosions and fires:**

Keep ignition sources away - do not smoke.

Protect from heat.

Do not store near heat sources.

· **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:**

Keep tightly closed in original packaging. Ventilate storage rooms well. Carefully close opened containers and store upright to prevent any leakage.

Storage temperature >5°C and <30°C

· **Information about storage in one common storage facility:**

May be stored together with hazardous substances of other classes up to 200 kg.

· **Further information about storage conditions:**

Keep container tightly closed in a well-ventilated place.

· **Storage class**

3

· **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: 123-86-4 n-butyl acetate

PEL (Malaysia) Long-term value: 713 mg/m<sup>3</sup>, 150 ppm

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**· DNELs**

**CAS: 28182-81-2 Aliphatisches Polyisocyanat**

Inhalative	DNEL	0.5 mg/m <sup>3</sup> (Workers) (long term local) 1 mg/m <sup>3</sup> (kei) (acute local eff)
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**CAS: 123-86-4 n-butyl acetate**

Inhalative	DNEL	480 mg/m <sup>3</sup> (ArL)
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**CAS: 108-65-6 2-methoxy-1-methylethyl acetate**

Dermal	DNEL	153.5 mg/kg bw/day (ArL)
Inhalative	DNEL	275 mg/m <sup>3</sup> (ArL)

**· PNECs**

**CAS: 28182-81-2 Aliphatisches Polyisocyanat**

PNEC aqua	12.7 µg/l (Daphnia magna) (marine)
PNEC	38.28 mg/l (kei) (STP)

**CAS: 108-65-6 2-methoxy-1-methylethyl acetate**

PNEC	0.635 mg/l (Fresh water)
	100 mg/l (Kla)
	0.0635 mg/l (Mew)
PNEC	0.29 mg/kg dwt (Bod)
	0.329 mg/kg dwt (Marine water sediment)
	3.29 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**

Do not smoke, eat or drink while working. Have eye wash equipment ready.  
Do not inhale gases/vapours/aerosols. Avoid contact with eyes and skin.  
Do not store food in the work area. Wash hands before breaks and at the end of work.

**· Breathing equipment:**

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.  
An nicht ausreichend entlüfteten Arbeitsplätzen und bei Spritzverarbeitung Atemschutz erforderlich. Empfohlen werden Frischluftmaske oder für kurzzeitige Arbeiten Kombinationsfilter A2-P2.

Bei Überempfindlichkeit der Atemwege und der Haut (Asthma,

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- **Protection of hands:** *chronische Bronchitis, chronische Hautleiden) wird der Umgang mit dem Produkt abgeraten.*  
*Suitable materials for protective gloves; EN 374:*  
*Butyl rubber - IIR: thickness  $\geq 0.5\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .*  
*Fluororubber - FKM: thickness  $\geq 0.4\text{mm}$ ; breakthrough time  $\geq 480\text{min}$ .*  
*Multi-layer glove - PE/EVAL/PE ; Breakthrough time  $\geq 480\text{ min}$ .*  
*Recommendation: Dispose of contaminated gloves.*  
*Bedingt geeignete Materialien für Schutzhandschuhe; EN 374-3:*  
*Nitrilkautschuk - NBR: Dicke  $\geq 0,35\text{mm}$*   
*Nur als Spritzschutz geeignet. Nur bei kurzzeitiger Einwirkung geeignet. Bei Kontamination sind die Schutzhandschuhe sofort zu wechseln.*
- **Material of gloves** *The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.*
- **Penetration time of glove material** *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  $\geq 480\text{min}$ .*  
*Multi-layer glove - PE/EVAL/PE ; Breakthrough time  $\geq 480\text{ min}$ .*
- **Eye protection:** *Wear safety goggles/face protection.*
- **Body protection:** *Wear suitable protective clothing when working.*  
*In case of hypersensitivity of the skin, handling of the product is not recommended.*

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

· <b>Form:</b>	<i>Fluid</i>
· <b>Colour:</b>	<i>Dark brown</i>
· <b>Smell:</b>	<i>Characteristic</i>

· <b>pH-value:</b>	<i>Not applicable.</i> <i>Not determined.</i>
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#### · Change in condition

· <b>Melting point/freezing point</b>	<i>Not determined</i>
· <b>Initial boiling point and boiling range</b>	<i>124-128 °C</i>

· <b>Flash point:</b>	<i>27 °C</i>
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· <b>Auto-ignition temperature</b>	<i>315 °C</i>
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· <b>Auto-ignition temperature</b>	<i>Product is not selfigniting.</i>
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· <b>Explosive properties:</b>	<i>Product is not explosive.</i>
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- **Critical values for explosion:**
  - Lower: 1.5 Vol %
  - Upper: 10.4 Vol %
- **Steam pressure at 20 °C:** 13 hPa
- **Vapour pressure at 50 °C:** 55 hPa
- **Density at 20 °C** 1.12 g/cm<sup>3</sup>
- **Solubility in / Miscibility with Water:** Hydrolized
- **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** Reacts with amines
- **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: 28182-81-2 Aliphatisches Polyisocyanat**

Oral LD50 >2500 mg/kg (rat) (OECD 423)

Dermal LD50 >2000 mg/kg (rat) (OECD 402)

**CAS: 123-86-4 n-butyl acetate**

Oral LD50 10760 mg/kg (rat)

Dermal LD50 >14112 mg/kg (rabbit)

Inhalative LC50/4 h 23.4 mg/l (rat)

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**CAS: 108-65-6 2-methoxy-1-methylethyl acetate**

Oral LD50 8500 mg/kg (rat)

Dermal LD50 >2000 mg/kg (rat)

**CAS: 108-32-7 Propylene carbonate**

Oral LD50 >5000 mg/kg (rat)

Dermal LD50 >2000 mg/kg (rabbit)

· **Primary irritant effect:**

· **Serious eye damage or eye irritation**

No irritant 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:

Harmful

Irritant

### 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

**CAS: 28182-81-2 Aliphatisches Polyisocyanat**

ErC10/72h 370 mg/l (Desmodesmus subspicatus) (EU C.3)

ErC50/72h >1000 mg/l (Desmodesmus subspicatus) (EU C.3)

**CAS: 123-86-4 n-butyl acetate**

IC50 356 mg/l (Bak)

EC50/72h 647.7 mg/l (Desmodesmus subspicatus)

LC50/96h 18 mg/l (Pimephales promelas)

EC50/48h 44 mg/l (Daphnia magna)

NOEC 200 mg/l (Desmodesmus subspicatus)

**CAS: 108-65-6 2-methoxy-1-methylethyl acetate**

LC50/96h 134 mg/l (Oncorhynchus mykiss)

161 mg/l (Pimephales promelas)

EC50 >1000 mg/l (BEL)

EC50/48h >500 mg/l (Daphnia magna)

NOEC 47.5 mg/l (Ory)

EC50/3d >1000 mg/l (Selenastrum capricornutum)

· **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 undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
- **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

· <b>UN-Number</b>	
· <b>ADR, IMDG, IATA</b>	UN1993
· <b>UN proper shipping name</b>	
· <b>ADR, IMDG, IATA</b>	FLAMMABLE LIQUID, N.O.S. (BUTYL ACETATES, 2-methoxy-1-methylethyl acetate)
· <b>Transport hazard class(es)</b>	
· <b>ADR</b>	
· <b>Class</b>	3 (F1) Flammable liquids.
· <b>Label</b>	3
· <b>IMDG, IATA</b>	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3
· <b>Packing group</b>	
· <b>ADR, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Warning: Flammable liquids.
· <b>Kemler Number:</b>	30
· <b>EMS Number:</b>	F-E, S-E
· <b>Stowage Category</b>	A
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.

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**· Transport/Additional information:**

**· ADR**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category**

3

· **Tunnel restriction code**

D/E

**· IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 1993 FLAMMABLE LIQUID, N.O.S. (BUTYL ACETATES, 2-METHOXY-1-METHYLETHYL ACETATE), 3, III

### 15 Regulatory information

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

**· EHS reference list**

CAS: 123-86-4 n-butyl acetate

CAS: 108-65-6 2-methoxy-1-methylethyl acetate

CAS: 108-32-7 Propylene carbonate

**· Directive 2012/18/EU**

**· Named dangerous**

**substances - ANNEX I**

None of the ingredients is listed.

**· Seveso category**

P5c FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements**

5000 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements**

50000 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.

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· **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*

*Flam. Liq. 3: Flammable liquids – Category 3*

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

*Skin Sens. 1: Skin sensitization – Category 1*

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

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

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