



BE SURE. BUILD SURE.

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

Printing date 16.11.2021

Version number 8

Revision: 16.11.2021

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

- **Product identifier**
- **Trade name** MC-DUR 2500 - 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 lacquer
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*
- **Emergency telephone number:** *Tel.: +49 / (0)700 24112112 (MCR)
Tel.: +48612864565*

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 Irrit. 2A H319 Causes serious eye irritation.
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.
STOT SE 3 H335 May cause respiratory irritation.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.*

- **Label elements**

- **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS07 GHS08

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- **Signal word** *Danger*
- **Hazard-determining components of labelling:** *diphenylmethanediisocyanate, isomeres and homologues
diphenylmethane-4,4'-di-isocyanate
diphenylmethane-2,2'-diisocyanate
diphenylmethane-2,4'-diisocyanate*
- **Hazard statements** *May be harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.*
- **Precautionary statements** *Do not breathe dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
[In case of inadequate ventilation] wear respiratory protection.
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
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/information on ingredients

- **Chemical characterisation: Mixtures**
- **Description:** *Active substance with propellant.
Mixture consisting of the following components.*

· **Dangerous components:**

9016-87-9	diphenylmethanediisocyanate, isomeres 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	70-100%
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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	≥10-<25%
2536-05-2	diphenylmethane-2,2'-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	≥5-<10%
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	≥5-<10%

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.
Seek medical treatment.
- **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.
Call a doctor immediately.
- **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** CO₂, extinguishing powder or water jet. Fight larger fires with water jet.
- **Special hazards arising from the substance or mixture** Can be released in case of fire
Carbon monoxide (CO)
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)
(Traces)

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

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.
- **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.
- **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 item 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 ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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101-68-8 diphenylmethane-4,4'-di-isocyanate

PEL (USA)	Ceiling limit: 0.2 mg/m ³ , 0.02 ppm
REL (USA)	Long-term value: 0.05 mg/m ³ , 0.005 ppm Ceiling limit: 0.2* mg/m ³ , 0.02* ppm *10-min
TLV (USA)	Long-term value: 0.005 ppm
WEL (Great Britain)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO

2536-05-2 diphenylmethane-2,2'-diisocyanate

WEL (Great Britain)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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5873-54-1 diphenylmethane-2,4'-diisocyanate

WEL (Great Britain)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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· DNELs

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

Inhalative	DNEL	0.05 mg/m ³ (ArL)
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101-68-8 diphenylmethane-4,4'-di-isocyanate

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

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

Inhalative	DNEL	0.05 mg/m ³ (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-isocyanate

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)

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· Ingredients with biological limit values:

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

BMGV (Great Britain) 1 µmol creatinine/mol
Medium: urine
Sampling time: At the end of the period od exposure
Parameter: isocyanate-derived diamine

2536-05-2 diphenylmethane-2,2'-diisocyanate

BMGV (Great Britain) 1 µmol creatinine/mol
Medium: urine
Sampling time: At the end of the period od exposure
Parameter: isocyanate-derived diamine

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

BMGV (Great Britain) 1 µmol creatinine/mol
Medium: urine
Sampling time: At the end of the period od 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:

Short term filter device:
In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

· Protection of hands:

Protective gloves.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

After use of gloves apply skin-cleaning agents and skin cosmetics.
Nitrile rubber, NBR
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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:

Safety glasses
Tightly sealed safety glasses.

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· **Body protection:** Protective work clothing.

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9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· Form:	Liquid
· Colour:	Dark brown
· Smell:	Characteristic

· **pH-value:** Not applicable.

· **Change in condition**

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

· **Flash point:** 220 °C

· **Ignition temperature:** 400 °C

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

· **Steam pressure at 25 °C:** 0.0002 hPa

· **Density at 20 °C** 1.24 g/cm³

· **Solubility in / Miscibility with**

· **Water:** Not miscible or difficult to mix

· **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

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11 Toxicological information

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

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

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

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)

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

12 Ecological information

- **Toxicity**

· **Aquatic toxicity:**

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.

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- **Mobility in soil** *No further relevant information available.*
- **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 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:** *Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.*

14 Transport information

- | | |
|---|-----------------|
| · UN-Number | Void |
| · ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | Void |
| · 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 |

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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.*
- **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 – Category 4
Acute Tox. 5: Acute toxicity – Category 5
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*

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