



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**TIP TOP REMACOAT SEALING LAYER COMP. B**

Revision date: 20.02.2017

Product code: 00359-1302

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**Hazard statements**

H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.

**Special labelling of certain mixtures**

EUH204	Contains isocyanates. May produce an allergic reaction.
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**2.3. Other hazards**

Not known.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Preparation with isocyanates

**Hazardous components**

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
9016-87-9	Diphenylmethanediisocyanate, isomers and homologues			60 - 100 %
	Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 2; H351 H332 H315 H319 H334 H317 H335 H373			
101-68-8	Diphenylmethane-4,4'-diisocyanate			30 - 60 %
	202-966-0	615-005-00-9	01-2119457014-47	
	Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 2; H351 H332 H315 H319 H334 H317 H335 H373			

Full text of H and EUH statements: see section 16.

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Remove contaminated soaked clothing immediately.  
In the event of persistent symptoms receive medical treatment.

**After inhalation**

Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.  
Keep warm and calm injured person.  
Refer for medical treatment.

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**After contact with skin**

Remove immediately adhering matter.  
Wash contaminated skin with plenty of water and soap or with liquid polyethylene glycol.  
Consult a physician.

**After contact with eyes**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Seek medical treatment by eye specialist.

**After ingestion**

Do not induce vomiting.  
Induce vomiting only upon the advice of a physician.  
Summon a doctor immediately.  
Rinse out mouth thoroughly with water.

**4.2. Most important symptoms and effects, both acute and delayed**

Harmful if inhaled.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.  
Suspected of causing cancer.  
May cause damage to organs through prolonged or repeated exposure.

**4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptoms.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Foam, carbon dioxide (CO<sub>2</sub>), dry chemical, water-spray.

**Unsuitable extinguishing media**

Full water jet.

**5.2. Special hazards arising from the substance or mixture**

Fire may produce:  
carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>)  
Hydrogen cyanide (HCN)  
Isocyanates (NCO).

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus and protective suit.

**Additional information**

Do not release chemically contaminated water into drains, soil or surface waters. Sufficient measures must be taken to retain water used for extinguishing.  
Cool containers at risk with water spray jet.  
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

In case of vapour formation use respirator.  
Ensure adequate ventilation.  
Use personal protective clothing.

**6.2. Environmental precautions**

Do not discharge into the drains/surface waters/ground water.



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Do not discharge into the subsoil/soil.

#### **6.3. Methods and material for containment and cleaning up**

- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
- Shovel into suitable container for disposal.
- Container should not be gas-tight closed.
- Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

#### **6.4. Reference to other sections**

- Observe protective instructions (see Sections 7 and 8).
- Information for disposal see section 13.

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

- Keep container tightly closed.
- Avoid contact with the skin and the eyes.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Do not breathe vapours.
- When working with spray, exhaustion of air becomes indispensable.
- Use only in thoroughly ventilated areas.

##### **Advice on protection against fire and explosion**

- No special protective measures against fire required.

#### **7.2. Conditions for safe storage, including any incompatibilities**

##### **Requirements for storage rooms and vessels**

- Keep container tightly closed in a dry, cool and well-ventilated place.
- Keep at temperatures between 5°C and 50°C.
- Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

##### **Advice on storage compatibility**

- Exothermic reaction with:
  - Acids and bases.
  - Water, amines, alcohols

##### **Further information on storage conditions**

- Keep away from food, drink and animal feeding stuffs.

#### **7.3. Specific end use(s)**

- Coating

### **SECTION 8: Exposure controls/personal protection**

#### **8.1. Control parameters**

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**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
101-68-8	Diphenylmethane-4,4'-diisocyanate			
Worker DNEL, acute		dermal	systemic	50 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	0,1 mg/m <sup>3</sup>
Worker DNEL, acute		dermal	local	28,7 mg/cm <sup>2</sup>
Worker DNEL, acute		inhalation	local	0,1 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	systemic	0,05 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	local	0,05 mg/m <sup>3</sup>
Consumer DNEL, acute		dermal	systemic	25 mg/kg bw/day
Consumer DNEL, acute		inhalation	systemic	0,05 mg/m <sup>3</sup>
Consumer DNEL, acute		oral	systemic	20 mg/kg bw/day
Consumer DNEL, acute		dermal	local	17,2 mg/cm <sup>2</sup>
Consumer DNEL, acute		inhalation	local	0,05 mg/m <sup>3</sup>
Consumer DNEL, long-term		inhalation	systemic	0,025 mg/m <sup>3</sup>
Consumer DNEL, long-term		inhalation	local	0,025 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	Value
101-68-8	Diphenylmethane-4,4'-diisocyanate	
Freshwater		1 mg/l
Marine water		0,1 mg/l
Soil		1 mg/kg
Micro-organisms in sewage treatment plants (STP)		1 mg/l
Freshwater (intermittent releases)		10 mg/l

**8.2. Exposure controls****Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

**Protective and hygiene measures**

Do not inhale vapours.

Avoid contact with eyes and skin.

Wash hands before breaks and immediately after handling the product.

When using do not eat, drink or smoke.

Take off immediately all contaminated clothing.

**Eye/face protection**

Tightly fitting goggles (EN 166).

Eye wash bottle with pure water (EN 15154).

**Hand protection**

Chemical protective gloves made of nitrile, nitrile/cotton, butyl or neoprene, with a minimum thickness of 0.7 mm, permeation time of approx. 480 minutes.

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Pls. find examples in the protective gloves database under: <http://bestglove.com/site/chemrest/>

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**Skin protection**

Light protective clothing

**Respiratory protection**

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A) (EN 14387).

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	Brown
Odour:	Musty

**Test method****Changes in the physical state**

Pour Point:

Flash point:

230 °C

Lower explosion limits:

n.d.

Upper explosion limits:

n.d.

Ignition temperature:

n.d.

Vapour pressure:

n.d.

(at 20 °C)

Density (at 25 °C):

1,25 g/cm<sup>3</sup>

Water solubility:

Reacts with water.

Viscosity / dynamic:

370 mPa·s

(at 25 °C)

**9.2. Other information**

No data available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No decomposition if stored and applied as directed.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Reactions with strong acids and alkalis.

Reacts with: Water, amines, alcohols

**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat.

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

**10.5. Incompatible materials**

Acids and bases.

Water, amines, alcohols

**10.6. Hazardous decomposition products**

Hydrogen cyanide gas

Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>).

Isocyanates

**SECTION 11: Toxicological information**

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**11.1. Information on toxicological effects****Acute toxicity**

Harmful if inhaled.  
No toxicological data available.

**Irritation and corrosivity**

Causes serious eye irritation.  
Causes skin irritation.

..

**Sensitising effects**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of causing cancer.  
Germ cell mutagenicity: Based on available data, the classification criteria are not met.  
Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

May cause respiratory irritation. ( (Diphenylmethanediisocyanate, isomers and homologues); (Diphenylmethane-4,4'-diisocyanate))

**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure. ( (Diphenylmethanediisocyanate, isomers and homologues); (Diphenylmethane-4,4'-diisocyanate))

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Additional information on tests**

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

**Practical experience****Other observations**

With hypersensitive people, reactions as cough or difficulty of breathing may appear even with tiny concentrations of isocyanates; therefore keep room aerated and ventilated.

**SECTION 12: Ecological information****12.1. Toxicity**

Ecological data are not available.

**12.2. Persistence and degradability**

Not readily biodegradable.

**12.3. Bioaccumulative potential**

A bioaccumulation potential is to be expected.

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

**12.6. Other adverse effects**

Low hazard to waters.

**Further information**

In aqueous systems, formation of insoluble and chemically inert (inactive) polyureas.  
Do not flush into surface water or sanitary sewer system.

**SECTION 13: Disposal considerations**



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#### 13.1. Waste treatment methods

##### Advice on disposal

Where possible recycling is preferred to disposal.  
Can be incinerated, when in compliance with local regulations.

##### Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances  
Classified as hazardous waste.

##### Contaminated packaging

Contaminated packagings are to be treated like the product itself.  
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.  
Packaging that cannot be cleaned should be disposed of like the product.

#### SECTION 14: Transport information

##### Land transport (ADR/RID)

14.1. UN number: -

##### Other applicable information

No hazardous material as defined by the transport regulations.

#### SECTION 15: Regulatory information

##### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 56: Diphenylmethane-4,4'-diisocyanate

2004/42/EC (VOC): 0 %

##### National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 1 - slightly water contaminating

##### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

#### SECTION 16: Other information

##### Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route  
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses  
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure  
IMDG = International Maritime Code for Dangerous Goods  
IATA/ICAO = International Air Transport Association / International Civil Aviation Organization  
MARPOL = International Convention for the Prevention of Pollution from Ships  
IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk



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GHS = Globally Harmonized System of Classification and Labelling of Chemicals

REACH = Registration, Evaluation, Authorization and Restriction of Chemicals

CAS = Chemical Abstract Service

EN = European norm

ISO = International Organization for Standardization

DIN = Deutsche Industrie Norm

PBT = Persistent Bioaccumulative and Toxic

vPvB = Very Persistent and very Bio-accumulative

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

**Relevant H and EUH statements (number and full text)**

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
EUH204	Contains isocyanates. May produce an allergic reaction.

**Further Information**

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*