

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

Printing date 21.07.2020

Revision: 21.07.2020

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** **HADALAN Topcoat M 12P, Komp. B**
- **Article number:** 40245B
- **UFI:** 28C0-G069-C00A-GXJ5
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture**  
2-component, lightfast water-dispersed protective coating for inside and outside. Solvent-free sealing.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Sievert Baustoffe GmbH & Co. KG  
Mühlenschweg 6  
D-49090 Osnabrück  
Tel.: +49 2363 5663-0
- **Further information obtainable from:**  
Abteilung: Produktsicherheit  
Tel.: +49 2363 5663-0  
info-hahne@sievert.de
- **1.4 Emergency telephone number:**  
Giftnformationszentrum Nord (GIZ Nord) Universität Göttingen,  
Tel.: 0551-19240

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

- |                   |   |
|-------------------|---|
| Acute Tox. 4      | H332 Harmful if inhaled.                                |
| Skin Sens. 1      | H317 May cause an allergic skin reaction.               |
| STOT SE 3         | H335 May cause respiratory irritation.                  |
| .....             |   |
| Aquatic Chronic 3 | H412 Harmful to aquatic life with long lasting effects. |

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
Hexamethylenendiisocyanat-Oligomer
- **Hazard statements**  
H332 Harmful if inhaled.

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H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

**2.3 Other hazards**
**Results of PBT and vPvB assessment**
**PBT:** Not applicable.

**vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

**3.2 Chemical characterisation: Mixtures**
**Description:** Aliphatic polyisocyanate.

**Dangerous components:**

CAS: 28182-81-2	Hexamethylenediisocyanat-Oligomer	50-100%
	⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	
CAS: 822-06-0 EINECS: 212-485-8	hexamethylene diisocyanate	<0.25%
	⚠ Acute Tox. 3, H311; Acute Tox. 1, H330; ⚠ Resp. Sens. 1, H334; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	

**Additional information:**

For the wording of the listed hazard phrases refer to section 16.

GHS CODE: PU40 (Komp. A + B)

### SECTION 4: First aid measures

**4.1 Description of first aid measures**
**General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

### SECTION 5: Firefighting measures

**5.1 Extinguishing media**
**Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

not applicable, product is not flammable

CO<sub>2</sub>, foam, dry powder, water spray for large fires.

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- **5.2 Special hazards arising from the substance or mixture**  
In case of fire: Carbon monoxide, nitrogen oxide, isocyanate and traces of hydrogen cyanide.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Mount respiratory protective device.  
During fire fighting respirator with independent air supply.  
Contaminated water can not penetrate into the soil, groundwater and surface waters.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate / vent care. Remove persons not involved.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.  
Mechanical, rest in touch with wet, absorbent material (sawdust, chemical binder, sand) cover. Record after 1 hour to waste container and do not cover (CO<sub>2</sub> evolution). Keep damp in a safe ventilated area for several days. further disposal see chapter 13.
- **6.4 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 disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Ensure adequate / vent care. Contact with skin and eyes.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Keep container tightly closed in a cool, well-ventilated place.
- **Information about storage in one common storage facility:** Store separate from eatables
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in a dry place.  
Protect from frost.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.

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· **8.2 Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:***Keep away from foodstuffs, beverages and feed.**Immediately remove all soiled and contaminated clothing**Wash hands before breaks and at the end of work.*· **Respiratory protection:***In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.**Not required if good ventilation*· **Protection of hands:***Protective gloves**The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.**Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*· **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. 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.**Suitable protective gloves made from rubber, nitrile rubber, butyl rubber.*· **Penetration time of glove material***The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*· **Eye protection:** Goggles recommended during refilling· **Body protection:** Protective clothing

## SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:****Form:** Fluid**Colour:** colorless· **Odour:** weak, charakteristic· **Odour threshold:** Not determined.· **pH-value:** Not determined.· **Change in condition****Melting point/freezing point:** Undetermined.**Initial boiling point and boiling range:** 300 °C· **Flash point:** 195 °C· **Flammability (solid, gas):** Not applicable.· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Product is not selfigniting.· **Explosive properties:** Product does not present an explosion hazard.· **Explosion limits:****Lower:** Not determined.**Upper:** Not determined.· **Vapour pressure at 20 °C:** 5 hPa

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· <b>Density at 20 °C:</b>	1.15 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic at 20 °C:</b>	1,400 mPas
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Solids content:</b>	99.7 %
· <b>9.2 Other information</b>	Reacts with water.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**  
Exothermic reactions with amines and alcohols with water gradual evolution of CO<sub>2</sub> in closed containers, pressure build-up and bursting.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**  
Harmful if inhaled.
- **Specific symptoms in biological assay:**  
Specific symptoms in animal studies:  
Below us, the available toxicological data on components.  
Acute toxicity, by oral route:  
Aliphatic polyisocyanate rat LD50: > 2,000 mg / kg  
Hexamethylene-1,6-diisocyanate homopolymer rat LD50: > 5,000 mg / kg  
Acute toxicity, by inhalation:  
Hexamethylene-1,6-diisocyanate homopolymer rat LC50: 158 mg / l, 4 h  
Method: OECD Test Guideline 403  
Hexamethylene-1,6-diisocyanate LC50 rat: 0.124 mg / l, 4 h  
Concentration of the saturated vapor of 1,6-HDI at 25 °C: 0.095 mg / l  
Primary skin irritation:  
Aliphatic polyisocyanate rabbit Result: slightly irritating  
Hexamethylene-1,6-diisocyanate homopolymer rabbit Result: slightly irritating  
Method: OECD Test Guideline 404  
Hexamethylene-1,6-diisocyanate rabbit Result: strong irritant  
Primary eye irritation:  
Aliphatic polyisocyanate rabbit Result: slightly irritating  
Hexamethylene-1,6-diisocyanate homopolymer rabbit Result: slightly irritating  
Method: OECD Test Guideline 405  
Hexamethylene-1,6-diisocyanate rabbit Result: strong irritant

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- **Primary irritant effect:**
- **Skin corrosion/irritation** slightly irritating
- **Serious eye damage/irritation** slightly irritating
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **Other information (about experimental toxicology):**  
sensitization:  
aliphatic polyisocyanate  
Skin sensitization of Magnusson / Kligman (maximization test): guinea pig  
Result: positive  
Method: OECD Test Guideline 406  
Hexamethylene-1,6-diisocyanate homopolymer  
Skin sensitization of Magnusson / Kligman (maximization test): guinea pig  
Result: The product works on the guinea pig sensitization.  
Method: OECD Test Guideline 406  
No pulmonary sensitization in animal studies.  
Both after intradermal as well as with inhalational induction was based polyisocyanate  
Hexamethylene diisocyanate in guinea pigs not lungensensibilisierendes potential  
be determined.  
Hexamethylene-1,6-diisocyanate  
Skin sensitization of Magnusson / Kligman (maximization test): guinea pig  
Result: positive  
Method: OECD Test Guideline 406  
Genotoxicity in vitro:  
Aliphatic polyisocyanate Ames test Result: negative  
Method: OECD Test Guideline 471  
Toxicological studies of a comparable product.  
Hexamethylene-1,6-diisocyanate homopolymer Ames test Result: negative  
Method: OECD Test Guideline 471  
Hexamethylene-1,6-diisocyanate  
Salmonella / microsome test (Ames test): Result: negative
- **Repeated dose toxicity**  
Over-exposure is a risk of concentration-dependent irritation of eyes, nose, throat and respiratory tract. Delayed appearance of symptoms and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. With hypersensitive people, reactions may be triggered at low isocyanate, also below the OEL. By prolonged contact with skin tanning and irritating effects are possible. Animal studies and other studies indicate that skin contact could play with diisocyanates in isocyanate sensitization and respiratory reactions involved.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** 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.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:**  
Toxicity to fish:  
aliphatic polyisocyanate  
LC50 28.3 mg / l  
Test species: Danio rerio (zebrafish) Duration of test: 96 h  
Method: OECD Test Guideline 203  
Hexamethylene-1,6-diisocyanate

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LC0&gt; 82.8 mg / l

Test species: *Danio rerio* (zebrafish) Duration of test: 96 h

Method: OECD Test Guideline 203

Sample preparation because of the reactivity of the substance with water:

Ultra turrax: 60 sec 8000 rpm, 24 magnetic stirrer; filtration.

Acute daphnia:

aliphatic polyisocyanate

EC50&gt; 100 mg / l

Test species: *Daphnia magna* (water flea) Duration of test: 48 h

Method: OECD Test Guideline 202

Sample preparation because of the reactivity of the substance with water:

Ultra turrax: 60 sec 8000 rpm, 24 magnetic stirrer; filtration.

Hexamethylene-1,6-diisocyanate

EC0&gt; 89.1 mg / l

Test species: *Daphnia magna* (water flea) Duration of test: 48 h

Sample preparation because of the reactivity of the substance with water:

Ultra turrax: 60 sec 8000 rpm, 24 magnetic stirrer; filtration.

Acute bacterial toxicity:

aliphatic polyisocyanate

EC50&gt; 10,000 mg / l

Method: OECD Test Guideline 209

Hexamethylene-1,6-diisocyanate

EC50 842 mg / l

Tested on: Activated Sludge Test time: 3 hours

Method: OECD Guideline for Testing of Chemicals, No.209

Acute Toxicity to algae:

aliphatic polyisocyanate

IC50&gt; 100 mg / l

Tested on: *Scenedesmus subspicatus* Duration of test: 72 h

Method: OECD Test Guideline 201

· **12.3 Bioaccumulative potential** No further relevant information available.· **12.4 Mobility in soil** No further relevant information available.· **Other information:**

The resin reacts with water at the interface with the formation of carbon dioxide to form a solid, high-melting and insoluble product (polyurea). This reaction is accelerated by surfactants (eg detergents) or water-soluble solvents. Previous experience shows that polyurea is inert and non-degradable.

· **Ecotoxicological effects:**· **Remark:** Harmful to fish· **Additional ecological information:**· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

· **12.5 Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |   |                 |
|---|-----------------|
| · <b>14.1 UN-Number</b><br>· <b>ADR, ADN, IMDG, IATA</b>                                    | Void            |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, ADN, IMDG, IATA</b>                      | Void            |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Class</b> | Void            |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                     | Void            |
| · <b>14.5 Environmental hazards:</b>  | Not applicable. |
| · <b>14.6 Special precautions for user</b>  | Not applicable. |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>            | Not applicable. |
| · <b>UN "Model Regulation":</b>   | Void            |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations:**
- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Other regulations, limitations and prohibitive regulations**  
 Das Produkt unterliegt RL 2004/42/EG.  
 EU-Grenzwert für den VOC-Gehalt dieses Produktes ist im gebrauchsfertigen Zustand: 140 g/l (2010).  
 Das Produkt enthält im gebrauchsfertigen Zustand: max. 1 g/l VOC.  
 (2007); 140 g / l (2010).  
 When ready for use, the product contains: max. 1 g / l VOC.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
 H302 Harmful if swallowed.  
 H311 Toxic in contact with skin.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H330 Fatal if inhaled.  
 H332 Harmful if inhaled.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 May cause respiratory irritation.

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**Abbreviations and acronyms:***IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organisation**ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)**ADR: Accord européen sur le transport 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**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**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)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Acute toxicity - dermal – Category 3**Acute Tox. 1: Acute toxicity - inhalation – Category 1**Acute Tox. 4: Acute toxicity - inhalation – Category 4**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Resp. Sens. 1: Respiratory sensitisation – Category 1**Skin Sens. 1: Skin sensitisation – Category 1**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

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