

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

- **1.1 Product identifier**
- **Trade name:** HADALAN E-PU 12P, Komp. B
- **Article number:** 50179 C
- **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, permanently elastic polyurethane grouting compound for horizontal expansion joints, Component B.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Heinrich Hahne GmbH & Co. KG  
Heinrich-Hahne-Weg 11  
45711 Datteln Tel.: 02363/5663-0
- **Further information obtainable from:**  
Abteilung: Produktsicherheit  
Tel.: 02363 5663-0  
Email: [info@hahne-bautenschutz.de](mailto:info@hahne-bautenschutz.de)
- **1.4 Emergency telephone number:**  
Giftinformationszentrum 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**



GHS08 health hazard

- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 Carc. 2 H351 Suspected of causing cancer.  
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

- Acute Tox. 4 H332 Harmful if inhaled.  
 Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2 H319 Causes serious eye irritation.  
 Skin Sens. 1 H317 May cause an allergic skin reaction.  
 STOT SE 3 H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
- **Hazard description:** Xn Harmful
- **Information concerning particular hazards for human and environment:**  
 R 20 Harmful by inhalation.  
 R 36/37/38 Irritating to eyes, respiratory system and skin.  
 R 40 Limited evidence of a carcinogenic effect.  
 R 42/43 May cause sensitisation by inhalation and skin contact.  
 R 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
 Contains isocyanates. May produce an allergic reaction.

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· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· **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 GHS08

· **Signal word Danger**

· **Hazard-determining components of labelling:**

diphenylmethanediisocyanate, isomeres and homologues

· **Hazard statements**

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

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.

P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

P308+P313 **IF exposed or concerned:** Get medical advice/attention.

· **Additional information:**

Contains isocyanates. May produce an allergic reaction.

· **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:** Polyisocyanate based on diphenylmethane diisocyanate

· **Dangerous components:**

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues 	50-100%
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· **Additional information:** For the wording of the listed risk phrases refer to section 16.

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### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **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:** CO<sub>2</sub>, foam, dry powder, with larger fires, water.
- **5.2 Special hazards arising from the substance or mixture**  
Carbon dioxide, carbon monoxide, nitrogen oxide, isocyanate vapor and traces of hydrogen cyanide.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.
- **Additional information**  
Contaminated extinguishing water does not infiltrate into the soil, groundwater or surface waters.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Avoid skin and eye contact.  
Ensure adequate ventilation.
- **6.2 Environmental precautions:** Can not enter the sewage system.
- **6.3 Methods and material for containment and cleaning up:**  
Remove mechanically remains with damp, non-flammable  
Material (sawdust, chemical binder based on calcium silicate hydrate, sand). Record after about 1 hour transfer to waste container and do not seal (evolution of CO<sub>2</sub>). Keep moist and let stand in a safe place outdoors for several days. After deposition on minor or hazardous waste landfill or incinerate.
- **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** Avoid 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.
- **Information about storage in one common storage facility:** Keep away from foodstuffs.
- **Further information about storage conditions:** Store in a cool, dry place.
- **7.3 Specific end use(s)** No further relevant information available.

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### 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:**

**9016-87-9 diphenylmethanediisocyanate, isomeres and homologues (50-75%)**

WEL	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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· **Additional information:** The lists valid during the making were used as basis.

· **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.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In insufficiently ventilated working areas and during spraying respiratory protection is required.

An air-fed mask, or for short periods of work combined filter A2-P2.

Hypersensitivity of the airways is inadvisable to work with the product.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

Suitable materials for safety gloves:

Polychlorpropen - CR (> = 0.5 mm), nitrile rubber - NBR (> = 0.35 mm), butyl rubber - IIR (> = 0.5 mm), fluorine rubber - FKM (> = 0.4 mm), polyvinylchloride - PVC (> = 0.5 mm)

· **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.

· **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:** Tightly sealed goggles

· **Body protection:** Work clothes.

### SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Dark brown

· **Odour:** characteristic

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: > 350 °C

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· <b>Flash point:</b>	> 200 °C (DIN 51758)
· <b>Ignition temperature:</b>	400 °C
· <b>Self-igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Density at 20 °C:</b>	1.15 g/cm <sup>3</sup> (DIN 53217)
· <b>Solubility in / Miscibility with water:</b>	reacts slowly with water at room temperature
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
Temperatures above 30 °C. Development of steam.  
From about 200 °C polymerization evolution of CO<sub>2</sub>.
- **10.3 Possibility of hazardous reactions**  
Exothermic reaction with amines and alcohols, CO<sub>2</sub>, in closed containers, pressure build-up 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 hazardous decomposition products when properly stored and handled.

### SECTION 11: Toxicological information

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

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

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4 h	0.5 mg/l (rat)

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

Oral	LD50	>15000 mg/kg (rat)
Inhalative	LC50/4 h	490 mg/l (rat)

· **Specific symptoms in biological assay:**

- Primary skin irritation:  
Formaldehyde, oligomeric reaction products with aniline and phosgene (oligomeric MDI)  
rabbits  
Result: irritating  
Method: OECD Test Guideline 404  
Toxicological studies of a comparable product.  
Primary eye irritation:  
Formaldehyde, oligomeric reaction products with aniline and phosgene (oligomeric MDI)

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rabbits

Result: not irritating

Method: OECD Test Guideline 405

Toxicological studies of a comparable product.

sensitization:

Formaldehyde, oligomeric reaction products with aniline and phosgene (oligomeric MDI)

Classification according to Directive 2006/121/EC Annex VI.

Classification: May cause sensitization by inhalation and skin contact.

Subacute, subchronic and prolonged toxicity:

Formaldehyde, oligomeric reaction products with aniline and phosgene (oligomeric MDI)

Long-term inhalation study of tech. Diphenylmethane diisocyanate (PMDI) carried out mechanically generated respirable PMDI aerosols. Aerodynamic diameter: 95% below 5 microns concentrations: 0.2, 1.0 and 6.0 mg / m<sup>3</sup> - Animal groups: 120 rats (60 female, 60 male)

Results after clinical and histopathological examination of the animals: 0,2 mg aerosols / m<sup>3</sup>: No irritation of the respiratory tract and lungs "no effect level" (NOEL).

1.0 mg aerosols / m<sup>3</sup>: Slight irritation and inflammation.

· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:** Irritating effect.

· **Sensitisation:**

Sensitisation possible through inhalation.

Sensitisation possible through skin contact.

· **Other information (about experimental toxicology):**

Concentration of the saturated vapor of 4,4-MDI at 25 °C: 0.09 mg / m

Over-exposure is a risk of concentration-dependent irritant to the eyes, nose, throat and respiratory tract.

Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may already be initiated at very low Isocyanantkonzentrationen.

By prolonged contact with skin tanning and irritating effects are possible.

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

## 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:**

Acute toxicity to fish:

Formaldehyde, oligomeric reaction products with aniline and phosgene (oligomeric MDI)

LC<sub>50</sub> > 1,000 mg / l

Species: Danio rerio (Zebrafish)

Exposure time: 96 h

Method: OECD Test Guideline 203

Acute Toxicity to daphnia:

Formaldehyde, oligomeric reaction products with aniline and phosgene (oligomeric MDI)

EC<sub>50</sub> > 1000 mg / l

Species: Daphnia magna (water flea)

Exposure time: 24 h

Method: OECD Test Guideline 202

Acute Toxicity to bacteria:

Formaldehyde, oligomeric reaction products with aniline and phosgene (oligomeric MDI)

EC<sub>50</sub> > 100 mg / l

Tested on: activated sludge test time: 3 h

Method: OECD Test Guideline 209

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*Investigation of a comparable product.*

*Persistence and degradability*

*Biodegradation:*

*Formaldehyde, oligomeric reaction products with aniline and phosgene (oligomeric MDI)*

*Biodegradation: 0%, 28 d, i.e. non-degradable*

*Method: OECD Guideline 302 C*

*Investigation of a comparable product.*

*For more information on ecotoxicology:*

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

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **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 empty into drains.*

*For disposal, local regulations have to be observed. Perform liquid component to a suitable incineration.*

*Product may be disposed of after curing together with household waste.*

· **European waste catalogue**

08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances
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· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

· **14.5 Environmental hazards:**

· **Marine pollutant:**

No

· **14.6 Special precautions for user**

Not applicable.

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

*This preparation is not classified as dangerous close to the international transport regulations.*

### SECTION 15: Regulatory information

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

· **National regulations:**

· **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**Trade name: HADALAN E-PU 12P, Komp. B**

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### 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**

- 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.*
- R20 Harmful by inhalation.*
- R36/37/38 Irritating to eyes, respiratory system and skin.*
- R40 Limited evidence of a carcinogenic effect.*
- R42/43 May cause sensitisation by inhalation and skin contact.*
- R48 Danger of serious damage to health by prolonged exposure.*

· **Abbreviations and acronyms:**

- 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)*
- LC50: Lethal concentration, 50 percent*
- LD50: Lethal dose, 50 percent*
- Acute Tox. 4: Acute toxicity, Hazard Category 4*
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2*
- Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1*
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1*
- Carc. 2: Carcinogenicity, Hazard Category 2*
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*
- STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2*