

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

- **Product identifier**
- **Trade name:** HADALAN DDV 32P
- **Article number:** 50013 C
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation**
Solvent-containing, chemical-resistant deep impregnation for concrete and screed surfaces
- **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
- **Emergency telephone number:**
Giftinformationszentrum Nord (GIZ Nord) Universität Göttingen,
Tel.: 0551-19240

2 Hazards identification

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



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

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.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **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 10 Flammable.
 R 20/21 Harmful by inhalation and in contact with skin.
 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.
 R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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Contains isocyanates. May produce an allergic reaction.

· **Classification system:**

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

· **Label elements**

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Flammable.

· **Code letter and hazard designation of product:**



Xn Harmful

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

Aromatic polyisocyanate prepolymer
(MDI isomers and homologues, mix)
xylene, mixed isomers, pure

· **Risk phrases:**

- 10 Flammable.
- 20/21 Harmful by inhalation and in contact with skin.
- 36/37/38 Irritating to eyes, respiratory system and skin.
- 40 Limited evidence of a carcinogenic effect.
- 42/43 May cause sensitisation by inhalation and skin contact.
- 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**

- 16 Keep away from sources of ignition - No smoking.
- 23 Do not breathe vapour.
- 24/25 Avoid contact with skin and eyes.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
- 36/37 Wear suitable protective clothing and gloves.
- 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **Special labelling of certain preparations:** Contains isocyanates. May produce an allergic reaction.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Solution of a polyisocyanate based on diphenylmethane diisocyanate.

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· Dangerous components:		
CAS: 1330-20-7 EINECS: 215-535-7	xylene, mixed isomers, pure ☒ Xn R20/21; ☒ Xi R38 R10 ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	50-100%
CAS: 64742-47-8 EINECS: 265-149-8	Distillates (petroleum), hydrotreated light ☒ Xn R65; ☒ N R51/53 R10-66-67 ⚠ Flam. Liq. 3, H226; ⚠ Aquatic Chronic 2, H411	10-25%
CAS: 9016-87-9	diphenylmethanediisocyanate, isomeres and homologues ☒ Xn R20-40-48; ☒ Xn R42/43; ☒ Xi R36/37/38 ⚠ Resp. Sens. 1, H334; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10-25%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **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.

· **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 spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture**

When heated and in case of fire poisonous gases are produced.

· **Advice for firefighters**

· **Protective equipment:** Mount respiratory protective device.

6 Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

· **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.

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- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep only in original container, keep away from direct sunlight and heat sources.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in a cool, dry place.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

1330-20-7 xylene, mixed isomers, pure (50-100%)	
WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
9016-87-9 diphenylmethanedüocyanate, isomeres and homologues (10-25%)	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
64742-47-8 Distillates (petroleum), hydrotreated light (10-25%)	
TRGS 900	Kurzzeitwert: 500 mg/m ³ , 100 ppm

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

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Avoid contact with the eyes and skin.

· **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.

Recommended filter device for short-term use: Filter AX

· **Protection of hands:**

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

Solvent resistant gloves.

· **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 materials for protective gloves, EN 374-3:

Polychloroprene - CR: thickness > = 0.5 mm, breakthrough time > = 480 min.

Nitrile rubber - NBR: thickness > = 0,35 mm, breakthrough time > = 480 min.

Butyl rubber - IIR: thickness > = 0.5 mm, breakthrough time > = 480 min.

Fluorocarbon - FKM: thickness > = 0,4 mm, breakthrough time > = 480 min.

Recommendation: dispose of contaminated gloves.

· **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:** Tightly sealed goggles

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

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Light yellow

· **Odour:** Characteristic

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 137°C

· **Flash point:** 30°C

· **Ignition temperature:** 210°C

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: 0.5 Vol %

Upper: 7.0 Vol %

· **Vapour pressure at 20°C:** 6.7 hPa

· **Density at 20°C:** 0.9 g/cm³

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

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- | | |
|---|--|
| · Viscosity:
Kinematic at 20°C: | 30 s (DIN 53211/4) |
| · Solvent content:
Organic solvents: | 60-80 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Exothermic reaction with amines and alcohols.
- **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 relevant for classification:**

1330-20-7 xylene, mixed isomers, pure

Oral	LD50	8700 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rbt)
Inhalative	LC50/4 h	6350 mg/l (rat)

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

Oral	LD50	>15000 mg/kg (rat)
Inhalative	LC50/4 h	490 mg/m ³ (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
- **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

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Other information:**
The product reacts with water forming CO₂ and a solid insoluble, high melting polyurea is inert and non-degradable according to previous experience.
Biodegradation:
Diisocyanate, isomers and homologues
0% 28 d, i.e. non-degradable

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*Method: respirometer test**Toxicity to fish: LC0 > 1000 mg / l**Test Species: Brachydanio rerio (zebra fish) Duration of test: 96 h**Acute Toxicity to daphnia: EC50 > 1000 mg / l**Test species: Daphnia magna (water flea) Duration of test: 24 h**Acute Toxicity to bacteria: EC50 > 100 mg / l**Tested on: activated sludge test time: 3 h*

- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- Toxic for aquatic organisms*
- Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water*
- Do not allow product to reach ground water, water course or sewage system.*
- Danger to drinking water if even small quantities leak into the ground.*
- **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 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 dangerous substances
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---|
| <ul style="list-style-type: none"> · UN-Number · ADR, IMDG, IATA | UN1139 |
| <ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG, IATA | 1139 COATING SOLUTION (not viscous)
COATING SOLUTION |
| <ul style="list-style-type: none"> · Transport hazard class(es) · ADR, IMDG, IATA | 3 |
|  | |
| <ul style="list-style-type: none"> · Class · Label | 3 Flammable liquids.
3 |
| <ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA | III |

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· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	30
· EMS Number:	F-E,S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Tunnel restriction code	D/E
· UN "Model Regulation":	UN1139, COATING SOLUTION (not viscous), 3, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Technical instructions (air):**

Class	Share in %
I	10.5
NK	53.0
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Other regulations, limitations and prohibitive regulations**
Rule 905 Classification:
Tech. ("Polymer") MDI (pMDI) CAS no. 9016-87-9 (as respirable aerosols, respirable fraction) carcinogenic, category 3
Note the leaflet BG Chemie M 044 "polyurethane production and processing / isocyanates."
- **VOC (EU)** according to Directive 2004/42 / EC cat. A / h max. 700 g / l
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**
 - H226 Flammable liquid and vapour.
 - H312 Harmful in contact with skin.
 - 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.
 - H411 Toxic to aquatic life with long lasting effects.
- R10 Flammable.
- R20 Harmful by inhalation.
- R20/21 Harmful by inhalation and in contact with skin.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R38 Irritating to skin.

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

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- 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.*
- R51/53 *Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*
- R65 *Harmful: may cause lung damage if swallowed.*
- R66 *Repeated exposure may cause skin dryness or cracking.*
- R67 *Vapours may cause drowsiness and dizziness.*

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 Organization

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 Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent