

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

· 1.1 Product identifier

· **Trade name:** HADALAN HV3 30DD

· **Article number:** 50265 A

· **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**

1-component, light-resistant, solvent-containing adhesion agent for old PU substrates

· **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

· **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**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

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 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 43 May cause sensitisation by skin contact.

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**



GHS02 GHS07 GHS08

· **Signal word Danger**

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

Xylene
Hexamethylendiisocyanat-Oligomer
hexamethylene diisocyanate

· **Hazard statements**

H226 Flammable liquid and vapour.
H312+H332 Harmful in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
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+P312 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P331 Do NOT induce vomiting.

· **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:** Preparation based on aliphatic polyisocyanates.

· **Dangerous components:**

CAS: 1330-20-7	xylene, mixed isomers, pure	50-100%
EINECS: 215-535-7	 Xn R20/21;  Xi R38 R10	
	 Flam. Liq. 3, H226;  Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	

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CAS: 28182-81-2	Hexamethylendiisocyanat-Oligomer ✘ Xn R20; ✘ Xi R37; ✘ Xi R43 ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	(Contd. of page 2) 10-25%
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- **Additional information:**
For the wording of the listed risk phrases refer to section 16.
- GISCODE: PU50

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:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)
- **5.3 Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **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).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.

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SECTION 7: Handling and storage

- **7.1 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.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool, dry place.
- **Information about storage in one common storage facility:** Keep away from foodstuffs.
- **Further information about storage conditions:**
Open containers carefully to prevent closing by reaction with atmospheric moisture.
- **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:**

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
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822-06-0 hexamethylene diisocyanate (< 0.1%)

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ 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:** Not necessary if room is well-ventilated.

- **Protection of hands:**

Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Solvent-resistant gloves made of nitrile rubber, neoprene or Viton wear.

- **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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Tightly sealed goggles

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· **Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Fluid
Colour:	transparent
Odour:	like solvent

· **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 137 °C

· **Flash point:** 30 °C

· **Ignition temperature:** 500 °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:	1.1 Vol %
Upper:	7.0 Vol %

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

· **Density at 20 °C:** 0.94 g/cm³

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

Not miscible or difficult to mix.

· **9.2 Other information**

No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity**

· **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 forming CO₂-pressure buildup in closed containers, risk of 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**

Xylene CAS Nr.1330-20-7

acute toxicity

inhalation

Value Type: Acute toxicity estimate

Value: 20.37 mg / l

Method: Calculation method

Toxicity: Danger by skin resorption.

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Experience with human exposure: Prolonged skin contact may defat the skin and produce dermatitis.

Oral

Value Type: LD50

Value: 4.300 mg / kg

Species: rat

inhalation

Value Type: LC50

Value: 21.7 mg / l

Exposure time: 4 h

Species: rat

Notes: This literature data differs from the classification prescribed by the EU.

skin

Value Type: LD50

Value: 3.200 mg / kg

Species: rabbit

Notes: This literature data differs from the classification prescribed by the EU.

irritation

skin

Species: rabbit

Result: Irritating to skin.

eye

Species: rabbit

Result: Mild eye irritation

sensitization

Notes: sensitization did not occur in patch tests on human volunteers.

Acute toxicity, by oral route:

Hexamethylene-1,6-diisocyanate homopolymer

LD50 rat: > 5000 mg / kg

Acute toxicity, by inhalation:

Hexamethylene-1,6-diisocyanate homopolymer:

LC50 rat, male: 543 mg / m³, 4 h

Method: OECD Test Guideline 403

LC50 rat, female: 390 mg / m³, 4 h

Method: OECD Test Guideline 403

The substance was tested in a form (ie, specific particle size distribution) which is of the forms as they are marketed and used in all probability, is different. On the basis of the "split-entry" concept and the available data on the particle size during the final application of the material, a modified classification of the acute inhalation toxicity is warranted.

Subacute, subchronic and prolonged toxicity:

Hexamethylene-1,6-diisocyanate homopolymer

Application Route: Subacute inhalation toxicity study, rat

Method: OECD Test Guideline 412

Test concentrations - 4.3, 14.7 and 89.8 mg aerosols / m³

Exposure time - 3 weeks (6 hours a day, 5 days per week)

4.3 mg / m³ without compensation tolerated concentration (NOEL)

14.7 mg / m³ increase in lung weight,

89.8 mg / m³ inflammatory changes in the respiratory tract.

Links to other organ damage except to the respiratory systems were raised.

Genotoxicity in vitro:

Hexamethylene-1,6-diisocyanate homopolymer

Test Type: Salmonella / microsome test (Ames test)

Result: No evidence of mutagenic effects.

Method: OECD Test Guideline 471

Test Type: Chromosome aberration test in vitro

Result: negative

Method: OECD Test Guideline 473

Test Type: point mutation in mammalian cells (HPRT test)

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Result: negative

Method: OECD Test Guideline 476

For more information:

Hexamethylene-1,6-diisocyanate homopolymer

Special Features / Effects: If over-exposure - especially when spraying isocyanate paints without protective measures, there is the risk of concentration-dependent irritation of 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 triggered at low isocyanate concentrations below the TLV value.

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

Animal experiments and other studies indicate that skin contact with diisocyanates in isocyanate sensitization and respiratory reactions may play a role.

· **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)

· **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.

· **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**

Xylene CAS-No. 1330-20-7

acute toxicity

fish

Species: *Pimephales promelas*

Exposure time: 96 h

Value Type: LC50

Value: 26.7 mg / l

Toxicity to daphnia and other aquatic invertebrates.

Species: *Daphnia magna*

Exposure time: 24 h

Value Type: EC50

toxicity

Acute toxicity to fish:

Hexamethylene-1,6-diisocyanate homopolymer

LC50 > 100 mg / l

Species: *Danio rerio* (Zebrafish)

Exposure time: 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 Toxicity to daphnia:

Hexamethylene-1,6-diisocyanate homopolymer

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EC50 > 100 mg / l

Species: *Daphnia magna* (water flea)

Exposure time: 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.

Acute Toxicity to algae:

Hexamethylene-1,6-diisocyanate homopolymer

IC50 > 100 mg / l

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

Method: OECD Test Guideline 201

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

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

Acute Toxicity to bacteria:

Hexamethylene-1,6-diisocyanate homopolymer

EC50 > 1000 mg / l

Tested on: activated sludge test time: 3 h

Method: OECD Test Guideline 209

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability**

Xylene CAS-No. 1330-20-7

Biodegradation

Notes: Readily biodegradable.

bioaccumulation

Notes: Bioaccumulation is not expected.

Mobility in soil

Notes: No information available.

Hexamethylene-1,6-diisocyanate homopolymer

Biodegradation: 0%, 28 d, i.e. not readily biodegradable

Method: OECD Guideline 301 C

For more information on ecotoxicology:

The resin 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.

· **Additional ecological information:**

· **General notes:**

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.

· **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 dangerous substances
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

<ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA 	UN1139
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA 	1139 COATING SOLUTION, mixture (not viscous) COATING SOLUTION, mixture
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG, IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	III
<ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: 	Warning: Flammable liquids. 30 F-E,S-D
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Transport category · Tunnel restriction code 	5L 3 D/E
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN1139, COATING SOLUTION, mixture (not viscous), 3, III

SECTION 15: Regulatory information

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

Class	Share in %
I	0.1
NK	75.0

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

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· **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**

- H226 Flammable liquid and vapour.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- R10 Flammable.
- R20 Harmful by inhalation.
- R20/21 Harmful by inhalation and in contact with skin.
- R37 Irritating to respiratory system.
- R38 Irritating to skin.
- R43 May cause sensitisation by skin 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)
- 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Flam. Liq. 3: Flammable liquids, Hazard Category 3
- 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
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
- Asp. Tox. 1: Aspiration hazard, Hazard Category 1

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