

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

· **1.1 Product identifier**

· **Trade name:** HADALAN KS 13P, Komp.B

· **Article number:** 50336 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** 2-component PU adhesive layer.

· **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

E-Mail: 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

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 Danger of serious damage to health by prolonged exposure.

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.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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· **Hazard pictograms**



GHS07 GHS08

· **Signal word** *Danger*

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

diphenylmethanediisocyanate, isomeres and homologues

· **Hazard statements**

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.

P262 Do not get in eyes, on skin, or on clothing.

P273 Avoid release to the environment.

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

· **Additional information:**

Contains isocyanates. May produce an allergic reaction.

· **2.3 Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds and formaldehyde.

· **Results of PBT and vPvB assessment**

· **PBT:** *Not applicable.*

· **vPvB:** *Not applicable.*

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** *Isocyanat-Komponente.*

· **Dangerous components:** *Void*

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:** *When symptoms occur or in cases of doubt seek medical advice.*

· **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.*

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- **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:** Foam (alcohol resistant), carbon dioxide, powder, spray (water).
- **For safety reasons unsuitable extinguishing agents:** Water jet.
- **5.2 Special hazards arising from the substance or mixture**
Exposure to decomposition products may cause a health hazard.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear protective clothing. If necessary. Breathing apparatus is required.
- **Additional information** Do not allow the quenching water into the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected people away.
- **6.2 Environmental precautions:** 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.
- **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.
- **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 and at 5 °C to 30 °C.
- **Information about storage in one common storage facility:** Keep away from foodstuffs, beverages and feed.
- **Further information about storage conditions:**
Always store in original containers. Protect from heat and direct sunlight.
- **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:**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues (50-100%)

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.

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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.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
Respiratory protection in case of insufficient ventilation, aerosol or mist formation required.
- **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
- **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.
Recommended: nitrile or 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:** Tightly sealed goggles
- **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Fluid
Colour:	brownish
Odour:	Characteristic
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
- **Flash point:** > 240 °C
- **Ignition temperature:** 520 °C
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined.
- **Solubility in / Miscibility with water:** Not miscible or difficult to mix.
- **Solvent content:**
- | | |
|------------------------|---------|
| Solids content: | 100.0 % |
|------------------------|---------|
- **9.2 Other information** No further relevant information available.

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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**
Reacts exothermically with oxidizing agents, amines, strong bases, alcohols, and the elimination of carbon dioxide with water and carboxylic acids.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Prior to strongly acidic and alkaline materials as well as oxidants in order to avoid exothermic reactions.
- **10.6 Hazardous decomposition products:**
At high temperatures, carbon dioxide, carbon monoxide, oxides of nitrogen.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity:**
- | | | |
|---|----------|-----------------------------|
| · LD/LC50 values relevant for classification: | | |
| 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.
 - **Sensitisation:**
Sensitisation possible through inhalation.
Sensitisation possible through skin contact.
 - **Other information (about experimental toxicology):** There are no data available on the preparation itself
 - **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
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
This does not meet the criteria for classification as CMR category 1 or 2

SECTION 12: Ecological information

- **12.1 Toxicity**
Rats were exposed for two years a respirable aerosol of polymeric MDI, which resulted in high concentrations in chronic lung irritation . Only at the highest concentration (6 mg / m³) a significant incidence of benign lung tumor (adenoma) and a malignant tumor was found (adenocarcinoma) . At 1 mg / m³ were no lung tumors at , at 0.2 mg / m no effects .
Overall, the incidence of both benign and malignant tumors and the number of animals with tumors did not differ from the control. The increased incidence of ungentumoren is with the longer respiratory irritation and the consequent accumulation of yellow material in the lung connected to what was observed during the study. If prolonged exposure to high concentrations above does not exist, which leads to chronic irritation and lung damage , tumor formation is highly unlikely.
Mutagenicity: No known significant effects or critical hazards .
Teratogenicity: No known significant effects or critical hazards .
Developmental effects : In two independent animal experiments (rats) were determined from defects in newborns. At high doses that were extremely toxic to the mother (including lethal), a fetotoxicity was observed. At maternally non-toxic doses no fetotoxicity was adopted. At the doses used in these experiments is

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around

maximum respirable concentrations well above the defined TLVs .

- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:**

Biodegradation:

Diisocyanate, isomers and homologues

0% 28 d, i.e. non-degradable

Method: respirometer test

Toxicity to fish: LC₅₀ > 1,000 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

- **12.3 Bioaccumulative potential**

Taking into account the production and use of the substance can be assumed that no significant pollution of air or water will occur. Not miscible with water , but reacts with water and forms inert non-biodegradable solids. The conversion to soluble

Products, including * diaminodiphenylmethane (MDA) that runs under optimal

Laboratory conditions of good dispersion and low concentration very slowly. In air, the dominant degradation process and by analogy with related diisocyanates calculation is probably a relatively rapid OH radical attack compared to a similar product , the following values are expected. The measured Ökotoxizität refers to the hydrolysed product under conditions which are favorable for the formation of soluble species. Even under these conditions, the observed toxicity is low / very low. A pond study showed that severe contamination , no significant toxic effects on a wide range of plants in all Tropieebenen (including fish) , no discernible diaminodiphenylmethane (MDA) and no evidence of bioaccumulation of MDI or MDA had the consequence .

- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow into drains or water courses.
- **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.

No longer usable components in the prescribed mixing and allow to harden.

Disposal according to official regulations.

- **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.

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SECTION 14: Transport information

· 14.1 UN-Number · ADR, ADN, IMDG, IATA	Void
· 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	Void
· 14.4 Packing group · ADR, IMDG, IATA	Void
· 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 according to international transport regulations.
· UN "Model Regulation":	UN2489, DIPHENYLMETHANE-4,4'-DIISOCYANATE

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	100%

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Other regulations, limitations and prohibitive regulations**

By the European Council of Paint, Printing Ink and Artists' Colours Manufacturers - CEPE - The following information is given for isocyanate paint materials: Ready paints containing isocyanates have an irritating effect on the mucous membranes - especially on breathing organs - and cause hypersensitivity reactions. Inhalation of vapor or spray mist may cause sensitization. When dealing with isocyanates all precautions required for solvent based coating materials must be carefully observed. In particular, spray mist and vapors should not be inhaled. Allergies, asthma, and people who are prone to respiratory problems, may not be used for work with isocyanate paints.

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

· 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.

· **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

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

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*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**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*

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