

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

Printing date 13.11.2019

Revision: 13.11.2019

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

- **1.1 Product identifier** For professional use only
- **Trade name:** Hardener 9039
- **Article number:** 9039
- **1.2 Relevant identified uses of the substance or mixture and uses advised against** Surface Coating
- **Application of the substance / the mixture**  
Surface Coating  
Curing agent
- **Uses advised against** Product is not intended, labelled or packaged for consumer use.
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**  
HMG PAINTS LIMITED  
RIVERSIDE WORKS, COLLYHURST ROAD,  
MANCHESTER. M40 7RU  
UNITED KINGDOM  
TEL: +44 (0)161 205 7631  
EMAIL: sales@hmgpaint.com
- **Further information obtainable from:** sales@hmgpaint.com
- **1.4 Emergency telephone number:** +44 (0)161 205 7631 (Business hours)

**SECTION 2: Hazards identification**

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

Flam. Liq. 3	H226	Flammable liquid and vapour.
Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.
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**



GHS02 GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
Hexamethylene-1,6-diisocyanate Homopolymer  
Butyl ethanoate  
hexamethylene-1,6 diisocyanate
- **Hazard statements**  
H226 Flammable liquid and vapour.  
H302+H332 Harmful if swallowed or if inhaled.

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H317 May cause an allergic skin reaction.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**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: Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119970543-34-0001	Hexamethylene-1,6-diisocyanate Homopolymer ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	>50-≤100%
CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29-XXXX	Butyl ethanoate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	>25-≤50%
EC number: 918-668-5 Reg.nr.: 01-2119455851-35-xxxx	Solvent naphtha (petroleum), light aromatic ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335-H336	>2.5-≤10%
CAS: 822-06-0 EINECS: 212-485-8 Reg.nr.: 01-2119457571-37-0000/5/6	hexamethylene-1,6 diisocyanate ⚠ Acute Tox. 2, 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	≤1%

**Additional information:**

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

Hexamethylene -1,6-diisocyanate wt% &lt;0.5%

### SECTION 4: First aid measures

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

Immediately remove any clothing soiled by the product.

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

**After inhalation:**

In case of unconsciousness place the patient stably in side position for transportation. If the aerosol or vapour in inhaled in high concentrations, take the person into fresh air, keep warm and let rest. If there is difficulty in breathing, medical advice is required.

Supply fresh air and call for a doctor.

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

*Supply fresh air; consult doctor in case of complaints.*

· **After skin contact:**

*Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing.*

*Immediately rinse with water.*

· **After eye contact:**

*Hold the eye open and rinse with (preferably) luke warm water for a sufficiently long period of time (at least 10 minutes). Contact a doctor or ophthalmologist.*

· **After swallowing:**

*Do not induce vomiting; call for medical help immediately and show safety datasheet or label.*

*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** *Treat symptomatically.*

### SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

*CO<sub>2</sub>, 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** *No further relevant information available.*

· **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.*

*Prevent seepage into sewage system, workpits and cellars.*

*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.*

### SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

*Keep receptacles tightly sealed.*

*Ensure good ventilation/extraction at the workplace.*

*Prevent formation of aerosols.*

· **Information about fire - and explosion protection:**

*Keep ignition sources away - Do not smoke.*

*Protect against electrostatic charges.*

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store separately from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohols and water
- **Information about storage in one common storage facility:**  
Store separately from oxidising agents, strongly alkaline, strongly acidic materials, amines, alcohols and water.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed and in a well-ventilated place.  
Keep away from heat.
- **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:**

#### 28182-81-2 Hexamethylene-1,6-diisocyanate Homopolymer

EH40 WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup>
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#### 123-86-4 Butyl ethanoate

WEL	Short-term value: 966 mg/m <sup>3</sup> , 200 ppm Long-term value: 724 mg/m <sup>3</sup> , 150 ppm
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#### Solvent naphtha (petroleum), light aromatic

OEL	Long-term value: 100 mg/m <sup>3</sup>
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#### 822-06-0 hexamethylene-1,6 diisocyanate

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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- **DNELs**

#### 28182-81-2 Hexamethylene-1,6-diisocyanate Homopolymer

Inhalative	DNEL	0.5 mg/m <sup>3</sup> (Ind)
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#### 123-86-4 Butyl ethanoate

Oral	DNEL	2 mg/day (Con)
Dermal	DNEL	6 mg/day (Con)
		11 mg/day (Ind)
Inhalative	DNEL	35.7 mg/m <sup>3</sup> (Con)
		300 mg/m <sup>3</sup> (Ind)

#### Solvent naphtha (petroleum), light aromatic

Oral	DNEL	11 mg/day (Con)
Dermal	DNEL	11 mg/day (Con)
		25 mg/day (Ind)
Inhalative	DNEL	32 mg/m <sup>3</sup> (Con)
		150 mg/m <sup>3</sup> (Ind)

#### 822-06-0 hexamethylene-1,6 diisocyanate

Inhalative	DNEL	0.035 mg/m <sup>3</sup> (Ind)
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- **PNECs**

CAS No. 28182-81-2 Hexamethylene-1,6-diisocyanate Homopolymer

Freshwater: 0.127 mg/l

Marine water: 0.0127 mg/l

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Water: Intermittent release: 1.27 mg/l  
 Fresh water sediment: 266700 mg/kg dry weight  
 Marine sediment: 26670 mg/kg dry weight  
 STP (sewage-treatment plant): 38.3 mg/l  
 Soil: 53182 mg/kg dry weight  
 Air: No hazard identified  
 Secondary poisoning: Does not bioaccumulate.

CAS No. 123-86-4 Butyl Acetate

Freshwater: 0.18 mg/l

Marine water: 0.018 mg/l

Fresh water sediment: 0.981 mg/kg

Marine sediment: 0.0981 mg/kg

Soil: 0.0903 mg/kg

STP (sewage-treatment plant): 35.6 mg/l

Intermittent use/release: 0.36 mg/l

· **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.

· **Respiratory protection:**

In the case of hypersensitivity of the respiratory tract (e.g. asthmatics and those who suffer from chronic bronchitis) it is inadvisable to work with the product.

When spraying the product, use a respiratory protective device.

· **Protection of hands:**

When skin exposure may occur, advice should be sought from the glove supplier on appropriate types and usage times for this product.



Protective gloves

· **Material of gloves**

Conditionally suitable materials for protective gloves: DIN EN 374-3 fluorinated rubber - FKM: thickness &gt;0.04mm.

· **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

## SECTION 9: Physical and chemical properties

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

Form: Liquid

Colour: Clear

· **Odour:** Characteristic· **Odour threshold:** Not determined.

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· <b>pH-value:</b>	<i>Not determined.</i>
· <b>Change in condition</b> <b>Melting point/freezing point:</b> <b>Initial boiling point and boiling range:</b>	<i>Undetermined.</i> <i>126 °C</i>
· <b>Flash point:</b>	<i>27 °C</i>
· <b>Flammability (solid, gas):</b>	<i>Not applicable.</i>
· <b>Ignition temperature:</b>	<i>415 °C</i>
· <b>Decomposition temperature:</b>	<i>Not determined.</i>
· <b>Auto-ignition temperature:</b>	<i>Product is not selfigniting.</i>
· <b>Explosive properties:</b>	<i>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</i>
· <b>Explosion limits:</b> <b>Lower:</b> <b>Upper:</b>	<i>1.2 Vol %</i> <i>7.5 Vol %</i>
· <b>Vapour pressure at 20 °C:</b>	<i>11.2 hPa</i>
· <b>Density at 20 °C:</b> · <b>Relative density</b> · <b>Vapour density</b> · <b>Evaporation rate</b>	<i>1.041 g/cm<sup>3</sup></i> <i>Not determined.</i> <i>Not determined.</i> <i>Not determined.</i>
· <b>Solubility in / Miscibility with water:</b>	<i>NOT MISCIBLE</i>
· <b>Partition coefficient: n-octanol/water:</b>	<i>Not determined.</i>
· <b>Viscosity:</b> <b>Dynamic:</b> <b>Kinematic at 20 °C:</b>	<i>Not determined.</i> <i>16 s (DIN 53211/4)</i>
· <b>Solvent content:</b> <b>Organic solvents:</b>	<i>37.1 %</i>
<b>Solids content:</b> · <b>9.2 Other information</b>	<i>62.9 %</i> <i>No further relevant information available.</i>

### **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 reaction with amines and alcohols, reacts slowly with water forming CO<sub>2</sub>. In closed containers, risk of bursting due to increased pressure,*
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:**  
*Oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohols and water.*
- **10.6 Hazardous decomposition products:**  
*No dangerous decomposition products when stored and handled correctly*

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### SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity**

Harmful if swallowed or if inhaled.

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

**28182-81-2 Hexamethylene-1,6-diisocyanate Homopolymer**

Oral	LD50	>2,500 mg/kg (rat) (OECD Test Guideline 423)
Dermal	LD50	>2,000 mg/kg (rat) (OECD Test Guideline 402)
Inhalative	LC50/4 h	0.39 mg/l (rat) (Method: OECD Test Guideline 403)

**123-86-4 Butyl ethanoate**

Oral	LD50	10,760 mg/kg (rat)
Dermal	LD50	14,112 mg/kg (Rab)
Inhalative	LC50/4 h	23.4 mg/l (Rat)

**Solvent naphtha (petroleum), light aromatic**

Oral	LD50	3,492 mg/kg (rat)
Dermal	LD50	3,160 mg/kg (Rab)
Inhalative	LC50/4 h	6,193 mg/l (rat)

**822-06-0 hexamethylene-1,6 diisocyanate**

Oral	LD50	746 mg/kg (Rat)
Dermal	LD50	>7,000 mg/kg (Rat)
Inhalative	LC50/4 h	0.124 mg/l (Rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

· **Respiratory or skin sensitisation**

May cause an allergic skin reaction.

· **Additional toxicological information:**

Based on the properties of the isocyanate content of this product, respiratory exposure may cause acute irritation and / or sensitisation of the respiratory system, resulting in asthmatic symptoms, wheezing and a tightness of the chest, Sensitised persons may subsequently show asthmatic symptoms when exposed to airborne concentrations of isocyanates well below the occupational exposure limit. Repeated exposure may lead to permanent respiratory disability.

COSHH requires that persons exposed to products containing HDI which is a respiratory sensitiser are subject to appropriate health surveillance. Publications giving guidance on health surveillance are listed in Section 16.

· **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. May cause drowsiness or dizziness.

· **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:**

Acute Fish toxicity

Hexamethylene-1,6-diisocyanate Homopolymer

LC50 > 100 mg/l

Test type: Acute Fish toxicity

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*Species: Danio rerio (zebra fish)*  
*Exposure duration: 96 h*  
*Method: Directive 67/548/EEC, Annex V, C.1.*

*Acute toxicity for daphnia*  
*Hexamethylene-1,6-diisocyanate Homopolymer*  
*EC50 > 100 mg/l*  
*Species: Daphnia magna (Water flea)*  
*Exposure duration: 48 h*  
*Method: Directive 67/548/EEC, Annex V, C.2.*

*Acute toxicity for algae*  
*Hexamethylene-1,6-diisocyanate Homopolymer*  
*ErC50 > 1,000 mg/l*  
*Test type: Growth inhibition*  
*Species: scenedesmus subspicatus*  
*Exposure duration: 72 h*  
*Method: DIN 38412*

*Acute bacterial toxicity*  
*Hexamethylene-1,6-diisocyanate Homopolymer*  
*EC50 3,828 mg/l*  
*Test type: Respiration inhibition*  
*Species: activated sludge*  
*Exposure duration: 3 h*  
*Method: OECD Test Guideline 209*

*Ecotoxicology Assessment*  
*Hexamethylene-1,6-diisocyanate Homopolymer*  
*Acute aquatic toxicity: Based on available data, the classification criteria are not met.*  
*Chronic aquatic toxicity: There is no evidence of a chronic aquatic toxicity.*  
*Impact on Sewage Treatment: Because of the low bacterial toxicity, there is no risk of an adverse effect on the performance of biological waste water treatment plants.*  
*Acute Fish toxicity*  
*Solvent naphtha (petroleum), light arom. (content of benzene less than 0,1 %)*  
*LC50 9.22 mg/l*  
*Species: Oncorhynchus mykiss (rainbow trout)*  
*Exposure duration: 96 h*

*Acute toxicity for daphnia*  
*Solvent naphtha (petroleum), light arom. (content of benzene less than 0,1 %)*  
*EC50 6.14 mg/l*  
*Species: Daphnia magna (Water flea)*  
*Exposure duration: 48 h*

*Acute toxicity for algae*  
*Solvent naphtha (petroleum), light arom. (content of benzene less than 0,1 %)*  
*ErC50 2.9 mg/l*  
*Species: Pseudokirchneriella subcapitata (green algae)*  
*Exposure duration: 72 h*

*Acute bacterial toxicity*  
*Solvent naphtha (petroleum), light arom. (content of benzene less than 0,1 %)*  
*EC50 1 - 10 mg/l*

*Ecotoxicology Assessment*  
*Solvent naphtha (petroleum), light arom. (content of benzene less than 0,1 %)*  
*Chronic aquatic toxicity: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Data based on the safety data sheet (SDS) by the supplier.*  
*Acute Fish toxicity*  
*n-Butyl acetate*

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LC50 18 mg/l  
Species: *Pimephales promelas* (fathead minnow)  
Exposure duration: 96 h

Chronic Fish toxicity  
n-Butyl acetate  
No data available.

Acute toxicity for daphnia  
n-Butyl acetate  
EC50 44 mg/l  
Species: *Daphnia* (water flea)  
Exposure duration: 48 h

Chronic toxicity to daphnia  
n-Butyl acetate  
NOEC 23 mg/l  
Species: *Daphnia magna* (Water flea)  
Exposure duration: 21 d  
Method: OECD Test Guideline 211

Acute toxicity for algae  
n-Butyl acetate  
EC50 675 mg/l  
Species: *Scenedesmus quadricauda* (Green algae)  
Exposure duration: 72 h

Acute bacterial toxicity  
EC50 356 mg/l  
Species: activated sludge  
Exposure duration: 40 h

**12.2 Persistence and degradability**

Biodegradability  
Hexamethylene-1,6-diisocyanate Homopolymer  
Test type: aerobic  
Inoculum: activated sludge  
Biodegradation: 1 %, 28 d, i.e. not readily degradable  
Method: Directive 67/548/EEC Annex V, C.4.E.

Test type: aerobic  
Inoculum: activated sludge  
Biodegradation: 0 %, 28 d, i.e. not readily degradable

n-Butyl acetate  
Biodegradation: > 80 %, 5 d, i.e. readily biodegradable  
Method: OECD Test Guideline 301 D

Solvent naphtha (petroleum), light arom. (content of benzene less than 0,1 %)  
Biodegradation: 78 %, 28 d, i.e. readily biodegradable

Stability in water  
Hexamethylene-1,6-diisocyanate Homopolymer  
Test type: Hydrolysis  
Half life: 7.7 h at 23 °C  
The substance hydrolyzes rapidly in water.  
Photodegradation

Hexamethylene-1,6-diisocyanate Homopolymer  
Test type: Phototransformation in air  
Temperature: 25 °C

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*sensitizer: OH-radicals**Half-life indirect photolysis: 10.3 h**Method: SRC - AOP (calculation)**After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes.**Test type: Phototransformation in air**Temperature: 25 °C**sensitizer: OH-radicals**Half-life indirect photolysis: 3 h**Method: SRC - AOP (calculation)**After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes.**Studies of hydrolysis products.**Volatility (Henry's Law constant)**Hexamethylene-1,6-diisocyanate Homopolymer**Calculated value = < 0.000001 Pa\*m<sup>3</sup>/mol at 25 °C**Method: Bond-method**The substance has to be scored as non-volatile from water.*

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

- **12.4 Mobility in soil**

*Distribution among environmental compartments**Hexamethylene-1,6-diisocyanate Homopolymer**Adsorption/Soil**not applicable**Environmental distribution**Hexamethylene-1,6-diisocyanate Homopolymer**not applicable*

- **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**

*Hexamethylene-1,6-diisocyanate Homopolymer**This substance does not meet the criteria for classification as PBT or vPvB.**n-Butyl acetate**This substance does not meet the criteria for classification as PBT or vPvB.*

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects**

*Isocyanate reacts with water at the interface forming CO<sub>2</sub> and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by watersoluble solvents.**Previous experience shows that polyurea is inert and non-degradable.*

## 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.*

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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> · <b>ADR, IMDG, IATA</b>	UN1263
· <b>14.2 UN proper shipping name</b> · <b>ADR</b> · <b>IMDG, IATA</b>	1263 PAINT RELATED MATERIAL PAINT RELATED MATERIAL
· <b>14.3 Transport hazard class(es)</b> · <b>ADR, IMDG, IATA</b>	
	
· <b>Class</b> · <b>Label</b>	3 Flammable liquids. 3
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	III
· <b>14.5 Environmental hazards:</b> · <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b> · <b>Danger code (Kemler):</b> · <b>EMS Number:</b> · <b>Stowage Category</b>	Warning: Flammable liquids. 30 F-E, S-E A
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b> · <b>Tunnel restriction code</b>	3 D/E
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 1263 PAINT RELATED MATERIAL, 3, III

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c** FLAMMABLE LIQUIDS

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- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction:** 3

- **National regulations:**

- **Technical instructions (air):**

Class	Share in %
I	0.1
NK	37.1

- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

Publications available from the HSE:

Breath Freely, INDG 172; respiratory Sensitisers and COSHH - a guide for employers INDG95; Isocyanates - health hazards and precautionary measures, EH11 etc.

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.

- **Full text of H-Statements referred to under sections 2 and 3:**

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

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.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

- **Recommended restriction of use**

The product is used mainly as a hardener in coating materials or adhesives. The handling of coating materials or adhesives containing reactive polyisocyanates and residual monomeric HDI requires appropriate protective measures referred to in this safety data sheet. These products may therefore be used only in industrial or trade applications. They are not suitable for use in homemaker (DIY) applications.

- **Department issuing SDS:** Product safety department: LABORATORY

- **Contact:** Health & Safety Officer

- **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 Organisation

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 4: Acute toxicity – Category 4

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*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**Asp. Tox. 1: Aspiration hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

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