

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

### **1.1 Product identifier**

**Trade name:** Osmo Polyx®-Oil 2K Pure, component A

**Article number:** 6125/A

### **1.2 Relevant identified uses of the substance or mixture and uses advised against**

**advised against** No further relevant information available.

### **Application of the substance / the mixture**

Coating compound/ Surface coating/ paint  
Paint

### **1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:** Osmo Holz und Color GmbH & Co. KG  
Affhüppen Esch 12  
D-48231 Warendorf

### **Further information obtainable from:**

Product safety department  
Phone: +49 (0) 251 / 692 - 188  
Fax: +49 (0) 251 / 692 - 462  
e-mail: helmut.starp@osmo.de

### **1.4 Emergency telephone number:**

emergency phone no. Berlin (24h): +49 (0) 30 / 30686 790 advisory service in German and English

## **SECTION 2: Hazards identification**

### **2.1 Classification of the substance or mixture**

#### **Classification according to**

**Regulation (EC) No 1272/2008** The product is not classified, according to the CLP regulation.

### **2.2 Label elements**

#### **Labelling according to Regulation**

**(EC) No 1272/2008** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

**Precautionary statements** Although this product is not subject to identification regulations, we recommend that the safety suggestions are observed.

Keep out of reach of children.

If medical advice is needed, have product container or label at hand.

**Additional information:** Observe the general safety regulations when handling chemicals.

Always wear a dust mask when sanding.

### **Information concerning particular hazards for human and environment:**

Warning:

Wash out any used cloth impregnated with this product immediately after use or store in an airtight container (danger of self-ignition)

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**2.3 Other hazards****Results of PBT and vPvB assessment**

**PBT:** Not applicable.  
**vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

**3.2 Mixtures**

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

**Dangerous components:** Void

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

### SECTION 4: First aid measures

**4.1 Description of first aid measures**

**General information:** Take affected persons out into the fresh air.

Immediately remove any clothing soiled by the product.

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

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:** If swallowed, seek medical advice immediately and show this container or label.

**4.2 Most important symptoms and effects, both acute and delayed**

Dizziness

Headache

**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>, 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**

Formation of toxic gases is possible during heating or in case of fire.

**5.3 Advice for firefighters**

**Protective equipment:** Mouth respiratory protective device.

**Additional information** Cool endangered receptacles with water spray.

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Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### **SECTION 6: Accidental release measures**

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

Ensure adequate ventilation

**6.2 Environmental precautions:**

Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:**

Warm water and cleansing agent

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

**6.4 Reference to other sections**

See Section 13 for disposal information.

No dangerous substances are released.

### **SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Use only in well ventilated areas.

Keep receptacles tightly sealed.

Keep away from heat and direct sunlight.

Prevent formation of aerosols.

**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:**

Store only in the original receptacle.

Store in a cool location.

**Information about storage in one common storage facility:**

Do not store together with alkalis (caustic solutions).

Do not store together with oxidising and acidic materials.

**Further information about storage conditions:**

None.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

**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.

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**8.1 Control parameters**

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:**

The lists valid during the making were used as basis.

**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.  
Do not carry product impregnated cleaning cloths in trouser pockets.  
Avoid contact with the eyes and skin.

**Respiratory protection:**

Not necessary if room is well-ventilated.  
Use suitable respiratory protective device only when aerosol or mist is formed.

**Protection of hands:**

To avoid skin problems reduce the wearing of gloves to the required minimum.  
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**

Nitrile rubber, NBR

**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.

**For the permanent contact gloves made of the following materials are suitable:**

Nitrile rubber, NBR

**For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

**As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

**Eye protection:**

Goggles recommended during refilling

**Body protection:**

Protective work clothing

## **SECTION 9: Physical and chemical properties**

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

**General Information**

**Appearance:**

**Form:** Viscous

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<b>Colour:</b>	Yellowish
<b>Odour:</b>	Mild
<b>Change in condition</b>	
<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	not applicable
<b>Flash point:</b>	>100 °C (DIN 53213)
<b>Auto-ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Density at 20 °C:</b>	0.95-1.00 g/cm <sup>3</sup> (DIN 51757)
<b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic at 20 °C:</b>	20-35 s s (DIN 53211/4mm)
<b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	No further relevant information available.
<b>10.2 Chemical stability</b>	
<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
<b>10.3 Possibility of hazardous reactions</b>	Reacts with fabric soaked in the product (e.g. cleaning wool).
<b>10.4 Conditions to avoid</b>	No further relevant information available.
<b>10.5 Incompatible materials:</b>	No further relevant information available.
<b>10.6 Hazardous decomposition products:</b>	Carbon monoxide and carbon dioxide Nitrogen oxides (NO <sub>x</sub> )
<b>Additional information:</b>	Warning: Wash out any used cloth impregnated with this product immediately after use or store in an airtight container (danger of self-ignition)

### SECTION 11: Toxicological information

<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.

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**Primary irritant effect:**

**Skin corrosion/irritation** At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

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

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**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** Based on available data, the classification criteria are not met.

**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:** No further relevant information available.

**12.2 Persistence and degradability** No further relevant information available.

**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 1 (German Regulation) (Self-assessment): slightly hazardous for water

**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
15 01 10	packaging containing residues of or contaminated by dangerous substances

**Uncleaned packaging:**

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

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### SECTION 14: Transport information

<b>14.1 UN-Number</b> ADR, ADN, IMDG, IATA	Void
<b>14.2 UN proper shipping name</b> ADR, ADN, IMDG, IATA	Void
<b>14.3 Transport hazard class(es)</b> ADR, ADN, IMDG, IATA Class	Void
<b>14.4 Packing group</b> ADR, IMDG, IATA	Void
<b>14.5 Environmental hazards:</b> Marine pollutant:	No
<b>14.6 Special precautions for user</b>	Not applicable.
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	Void

### SECTION 15: Regulatory information

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

##### National regulations:

VOC (EC) < 50 g/l (VOC-max. = 500 g/l (2010 A/i))

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.

**Department issuing SDS:** product safety department

**Contact:** Hr. Dr. Starp

**Abbreviations and acronyms:**  
 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)  
 PBT: Persistent, Bioaccumulative and Toxic

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vPvB: very Persistent and very Bioaccumulative

*\* Data compared to the previous  
version altered.*



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

**1.1 Product identifier**

**Trade name:** Hardener for Osmo Polyx®-Oil 2K Pure, Component B

**Article number:** 6125/B

**CAS Number:** 28182-81-2  
 28182-81-2

**Registration number** 01-219488934-20

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use : Hardener for coating materials or adhesives for industrial and trade applications  
 Uses advised against : Not suitable for use in homemaker (DIY) applications.

**Application of the substance / the mixture**

Hardening agent/ Curing agent

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:** Osmo Holz und Color GmbH & Co. KG  
 Affhüppen Esch 12  
 D-48231 Warendorf

**Further information obtainable from:**

Product safety department  
 Phone: +49 (0) 251 / 692 - 188  
 Fax: +49 (0) 251 / 692 - 462  
 e-mail: helmut.starp@osmo.de

**1.4 Emergency telephone number:**

emergency phone no. Berlin (24h): +49 (0) 30 / 30686 790 advisory service in German and English

**SECTION 2: Hazards identification**

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

Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

**2.2 Label elements**

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

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

**Hazard pictograms**

GHS07

**Signal word**

Warning

**Hazard-determining components of labelling:**

Hexamethylene diisocyanate, oligomers

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<b>Hazard statements</b>	H332 Harmful if inhaled. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation.
<b>Precautionary statements</b>	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use. P260 Do not breathe mist/vapours/spray. P280 Wear protective gloves. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Additional information:</b>	Contains isocyanates. May produce an allergic reaction.
<b>2.3 Other hazards</b>	
<b>Results of PBT and vPvB assessment</b>	
<b>PBT:</b>	Not applicable.
<b>vPvB:</b>	Not applicable.

**SECTION 3: Composition/information on ingredients**
**3.1 Substances**

<b>CAS No. Description</b>	28182-81-2 Hexamethylen-1,6-diisocyanat homopolymer
<b>Description:</b>	Substance aliphatic polyisocyanate

**Dangerous components:**

CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119488934-20	Hexamethylene diisocyanate, oligomers ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1 Reg.nr.: 01-2119457571-37	hexamethylene-di-isocyanate ⚠ Acute Tox. 3, H331; ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	< 0.3%

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

**SECTION 4: First aid measures**
**4.1 Description of first aid measures**

<b>General information:</b>	Immediately remove any clothing soiled by the product.
<b>After inhalation:</b>	Supply fresh air; consult doctor in case of complaints.
<b>After skin contact:</b>	Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.

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**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:** Do not induce vomiting; call for medical help 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>, powder or water spray. Fight larger fires with water spray.

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

#### 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

Carbon monoxide (CO)

Nitrogen oxides (NO<sub>x</sub>)

(Traces)

Hydrogen cyanide (HCN)

#### 5.3 Advice for firefighters

**Protective equipment:** Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

Wear fully protective suit.

#### Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

#### 6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

#### 6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

Dispose of the material collected according to regulations.

#### 6.4 Reference to other sections

See Section 13 for disposal information.

### SECTION 7: Handling and storage

**7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

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**Information about fire - and explosion protection:** Prevent formation of aerosols.  
 Fumes can combine with air to form an explosive mixture.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage:**

**Requirements to be met by storerooms and receptacles:**

Store in a cool location.  
 Prevent any seepage into the ground.  
 Store only in the original receptacle.

**Information about storage in one common storage facility:**

Store away from foodstuffs.

**Further information about storage conditions:**

Store receptacle in a well ventilated area.  
 Store in cool, dry conditions in well sealed receptacles.

**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:**

**822-06-0 hexamethylene-di-isocyanate**

WEL	Long-term value: 0.1 mg/m <sup>3</sup> as Co; Carc
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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:**

Wash hands before breaks and at the end of work.  
 Immediately remove all soiled and contaminated clothing  
 Keep away from foodstuffs, beverages and feed.  
 Avoid contact with the eyes and skin.  
 Do not eat, drink, smoke or sniff while working.

**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.  
 Filter A/P2  
 In case of hypersensitivity of the respiratory tract and skin (e.g. asthmatics and those who suffer from chronic bronchitis and chronic skin complaint) it is inadvisable to work with the product.

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<b>Protection of hands:</b>	Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
<b>Material of gloves</b>	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. Butyl rubber, BR Fluorocarbon rubber (Viton)
<b>Penetration time of glove material</b>	The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
<b>For the permanent contact gloves made of the following materials are suitable:</b>	chemical resistant gloves (EN 374) Butyl rubber, BR For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).
<b>Not suitable are gloves made of the following materials:</b>	Nitrile rubber, NBR
<b>Eye protection:</b>	Safety glasses Face protection
<b>Body protection:</b>	Use protective suit. Protective work clothing

**SECTION 9: Physical and chemical properties**

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

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Light
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not applicable

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	285 °C (bei 1013 hPa DIN 53171)

**Flash point:** > 100 °C (DIN EN 22719)

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:** ca 435 °C (DIN 51794)

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<b>Decomposition temperature:</b>	ca. 150 °C
<b>Self-igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Vapour pressure at 20 °C:</b>	< 0.00001 hPa (EG A4)
<b>Density at 20 °C:</b>	1.15 g/cm <sup>3</sup> (DIN 51757)
<b>Relative density</b>	Not determined.
<b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient (n-octanol/water):</b>	8.38 log POW
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic at 20 °C:</b>	40 s (DIN 53211/6mm)
<b>9.2 Other information</b>	No further relevant information available.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	No further relevant information available.
<b>10.2 Chemical stability</b>	
<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
<b>10.3 Possibility of hazardous reactions</b>	Reacts with alcohols. Reacts with amines. Decomposes with water, acids and alkalis. Danger of bursting.
<b>10.4 Conditions to avoid</b>	No further relevant information available.
<b>10.5 Incompatible materials:</b>	No further relevant information available.
<b>10.6 Hazardous decomposition products:</b>	No hazardous decomposition products when stored and handled correctly. Keine gefährlichen Zersetzungsprodukte bei sachgemäßer Lagerung und Handhabung.

**SECTION 11: Toxicological information**

<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity</b>	Harmful if inhaled.

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**LD/LC50 values relevant for classification:****28182-81-2 Hexamethylene diisocyanate, oligomers**

Oral	LD50	>5000 mg/kg (rat)
Inhalative	LC50 / 4h	543 mg/l (rat) (OECD 403)

**822-06-0 hexamethylene-di-isocyanate**

Oral	LD50	738 mg/kg (rat)
Dermal	LD50	593 mg/kg (rat)

**Primary irritant effect:**

**Skin corrosion/irritation** At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

**28182-81-2 Hexamethylene diisocyanate, oligomers**

Dermal	. litt irriterende (rabbit) (OECD 404)
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**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation****28182-81-2 Hexamethylene diisocyanate, oligomers**

Inhalative	. positiv (mouse) (Lokaler Lymphknoten-Test (LLNA))
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May cause an allergic skin reaction.

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

Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing isocyanate sensitization and respiratory reaction.

**Additional toxicological information:**

Special properties/effects: Over-exposure, especially when spraying coatings containing isocyanate without the necessary precautions, entails the risk of concentration-dependent irritating effects on eyes, nose throat, and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low isocyanate concentrations, including concentrations below the UK Workplace Exposure Limit (WEL). Prolonged contact with the skin may cause tanning and irritant effects.

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Genotoxicity in vitro:  
 hexamethylene-1,6-diisocyanate homopolymer  
 Test type: Ames test; Result: negative; Method: OECD Test Guideline 471

Test type: Chromosome aberration test in vitro  
 Result: negative; Method: OECD Test Guideline 473  
 Toxicological studies of a comparable product.

Test type: Point mutation in mammalian cells (HPRT test)

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<p><b>Germ cell mutagenicity</b></p> <p><b>Carcinogenicity</b></p> <p><b>Reproductive toxicity</b></p> <p><b>STOT-single exposure</b></p> <p><b>STOT-repeated exposure</b></p> <p><b>Aspiration hazard</b></p>	<p>Result: negative; Method: OECD Test Guideline 476 Toxicological studies of a comparable product.</p> <p>Based on available data, the classification criteria are not met.</p> <p>Based on available data, the classification criteria are not met.</p> <p>Based on available data, the classification criteria are not met.</p> <p>May cause respiratory irritation.</p> <p>Based on available data, the classification criteria are not met.</p> <p>Based on available data, the classification criteria are not met.</p>
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**SECTION 12: Ecological information**

**12.1 Toxicity**

**Aquatic toxicity:**

**28182-81-2 Hexamethylene diisocyanate, oligomers**

EC50 / 48h	> 100 mg/l (daphnia) (OECD 202)
IC50 / 72h	199 mg/l (algae) (OECD 201)
LC50 / 96h	> 100 mg/l (Brachydanio rerio) (OECD 203)

**12.2 Persistence and degradability** Not easily biodegradable

**12.3 Bioaccumulative potential**

**28182-81-2 Hexamethylene diisocyanate, oligomers**

log POW	ca 8.38 (-)
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**12.4 Mobility in soil** Surface tension: ca. 46.5 mN/m at 20 °C  
Oberflächenspannung: ca. 46,5 mN/m bei 20 °C

**Ecotoxicological effects:**

**Behaviour in sewage processing plants:**

**28182-81-2 Hexamethylene diisocyanate, oligomers**

EC0 / 3h	>100 mg/l (daphnia)
EC50	> 10.000 mg/l (activated sludge organism) (OECD Guideline for Testing of Chemicals, No.209)

**Additional ecological information:**

**General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

The resin 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.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

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**12.6 Other adverse effects**

No further relevant information available.

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**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.

**Uncleaned packaging:****Recommendation:**

Disposal must be made according to official regulations.

**Waste treatment methods**

After final product withdrawal, all residues must be removed from containers (drip-free, powderfree or paste-free). Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. These containers can be returned for recycling to the appropriate centres set up within the framework of the existing takeback scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

**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 Marpol and the IBC Code**

Not applicable.

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**Transport/Additional information:**

Not dangerous according to the above specifications.  
 Special precautions for user : Not dangerous cargo.  
 Slight smell. Keep dry.  
 Avoid heat above +50 °C.  
 Keep away from foodstuffs, acids and alkalis.

**UN "Model Regulation":**

Void

**SECTION 15: Regulatory information**

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

No further relevant information available.

**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**

H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H331 Toxic if inhaled.  
 H332 Harmful if inhaled.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 May cause respiratory irritation.

**Department issuing MSDS:**

product safety department

**Contact:**

Hr. Dr. Starp

**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)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Acute Tox. 3: Acute toxicity, Hazard Category 3

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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  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

*\* Data compared to the previous  
version altered.*

