

# Safety Data Sheet

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

### 1.1 Product identifier

**Product name** : 891 STANDARD CURING AGENT  
**Product code** : 200020891

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

Intended use : See Technical Data Sheet.  
For professional use only.  
Application methods: See Technical Data Sheet.

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

Cromadex  
Unit 5 Redwood Business Park  
Oldbury Road Smethwick  
West Midlands  
B66 1NJ

**Telephone number** : +44 (0) 121 555 1500  
**Fax no.** : +44 (0) 121 555 6417

### 1.4 Emergency telephone number

#### Supplier

**Telephone number** : +44 (0) 779 965 6086  
**Hours of operation** : 24 Hr  
**Official Advisory Body Telephone No.:** +44 (0)207 635 9191  
**Advice for Doctors and Hospitals**

#### National advisory body/Poison Centre

**Telephone number** :  
**e-mail address of person responsible for this SDS** : uk.marketingservices@akzonobel.com

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226  
 Acute Tox. 4, H332  
 Skin Sens. 1, H317  
 STOT SE 3, H335  
 Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** :

Warning

**Hazard statements** :

Flammable liquid and vapour.  
 Harmful if inhaled.  
 May cause an allergic skin reaction.  
 May cause respiratory irritation.  
 Harmful to aquatic life with long lasting effects.

#### Precautionary statements

**Prevention** :

Wear protective gloves: > 8 hours (breakthrough time): polyvinyl alcohol (PVA) , Viton®; 4 - 8 hours (breakthrough time): neoprene , butyl rubber , nitrile rubber; < 1 hour (breakthrough time): natural rubber (latex). Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Avoid release to the environment.

**Response** :

IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

**Storage** :

Keep cool.

**Disposal** :

Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** :

Hexamethylene diisocyanate, oligomers  
 hexamethylene-di-isocyanate

**Supplemental label elements** :

Contains isocyanates. May produce an allergic reaction.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Other hazards which do not result in classification** : None known.

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

**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
Hexamethylene diisocyanate, oligomers	EC: 500-060-2 CAS: 28182-81-2	≥75 - ≤90	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]
Solvent naphtha (petroleum), light arom.	EC: 265-199-0 CAS: 64742-95-6 Index: 649-356-00-4	≤10	Flam. Liq. 3, H226 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1] [2]
xylene	EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	<10	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304	[1] [2]
ethylbenzene	EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304	[1] [2]
hexamethylene-di-isocyanate	EC: 212-485-8 CAS: 822-06-0 Index: 615-011-00-1	≤0.3	Acute Tox. 4, H302 Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335	[1] [2]

Date of issue/Date of revision : 24/3/2018 Date of previous issue : 13/7/2016. Version : 8 3/21

		See Section 16 for the full text of the H statements declared above.	
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this

<i>Date of issue</i> / <i>Date of revision</i>	: 24/3/2018	<i>Date of previous issue</i>	: 13/7/2016.	<i>Version</i>	: 8	4/21
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mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains Hexamethylene diisocyanate, oligomers, hexamethylene-di-isocyanate. May produce an allergic reaction.

#### 4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO<sub>2</sub>, powders, water spray or mist.
- Unsuitable extinguishing media** : Do not use water jet.

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

- Hazards from the substance or mixture** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.
- Special protective equipment for fire-fighters** : Appropriate breathing apparatus may be required.

## SECTION 6: Accidental release measures

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

- For non-emergency personnel** : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

- 6.3 Methods and material for containment and cleaning up** : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13).
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.**

**Examination of lung function should be carried out on a regular basis on persons spraying this mixture.**

- 7.1 Precautions for safe handling** : Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. Care should be taken when re-opening partly-used containers. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO<sub>2</sub> will be formed, which, in closed containers, could result in pressurisation. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws. Do not allow to enter drains or watercourses.
- Information on fire and explosion protection**  
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth,

<i>Date of issue/Date of revision</i>	: 24/3/2018	<i>Date of previous issue</i>	: 13/7/2016.	<i>Version</i>	: 8	6/21
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ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

## 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

### Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

### Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

## 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
Hexamethylene diisocyanate, oligomers	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Inhalation sensitiser.</b> STEL: 0.07 mg/m <sup>3</sup> , (as NCO) 15 minutes. TWA: 0.02 mg/m <sup>3</sup> , (as NCO) 8 hours.
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).] xylene	<b>European Hydrocarbon Solvent Suppliers (CEFIC-HSPA) methodology (Europe).</b> TWA: 100 mg/m <sup>3</sup> 8 hours. (Europe). : 100 mg/m <sup>3</sup> : 19 ppm  <b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 441 mg/m <sup>3</sup> 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.

Date of issue/Date of revision : 24/3/2018 Date of previous issue : 13/7/2016. Version : 8 7/21

ethylbenzene	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 552 mg/m <sup>3</sup> 15 minutes. STEL: 125 ppm 15 minutes. TWA: 441 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.
hexamethylene-di-isocyanate	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Inhalation sensitiser.</b> STEL: 0.07 mg/m <sup>3</sup> , (as NCO) 15 minutes. TWA: 0.02 mg/m <sup>3</sup> , (as NCO) 8 hours.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

No DNELs/DMELs available.

**PNECs**

No PNECs available

**8.2 Exposure controls**

**Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used.**

**Examination of lung function should be carried out on a regular basis on persons spraying this mixture.**

**Appropriate engineering controls** : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn. (See Occupational exposure controls.)

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Use safety eyewear designed to protect against splash of liquids.

<b>Date of issue/Date of revision</b>	: 24/3/2018	<b>Date of previous issue</b>	: 13/7/2016. <b>Version</b> : 8 8/21
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## Skin protection

### Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

**Gloves** : For prolonged or repeated handling, use the following type of gloves:

Recommended: polyvinyl alcohol (PVA) , Viton®

May be used: neoprene , butyl rubber , nitrile rubber

Not recommended: natural rubber (latex)

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

**Body protection** : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : By spraying: air-fed respirator.  
By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

**Environmental exposure controls** : Do not allow to enter drains or watercourses.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Odour** : Solvent.

**Odour threshold** : Not available.

**pH** : Not available.

**Melting point/freezing point** : Not available.

**Initial boiling point and boiling range** : Not available.

**Flash point** : Closed cup: 26°C

**Evaporation rate** : Not available.

<i>Date of issue</i> / <i>Date of revision</i>	: 24/3/2018	<i>Date of previous issue</i>	: 13/7/2016.	<i>Version</i>	: 8	9/21
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<b>Flammability (solid, gas)</b>	: Not available.
<b>Upper/lower flammability or explosive limits</b>	: Greatest known range: Lower: 1.4% Upper: 7.6% (Solvent naphtha (petroleum), light arom.)
<b>Vapour pressure</b>	: Not available.
<b>Vapour density</b>	: Not available.
<b>Relative density</b>	: 1.09
<b>Solubility(ies)</b>	: Insoluble in the following materials: cold water.
<b>Partition coefficient: n-octanol/ water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (room temperature): 0.9 cm <sup>2</sup> /s (90 cSt)

## 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: Stable under recommended storage and handling conditions (see Section 7).
<b>10.3 Possibility of hazardous reactions</b>	: The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container.
<b>10.4 Conditions to avoid</b>	: In a fire, hazardous decomposition products may be produced.
<b>10.5 Incompatible materials</b>	: Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects

<b>Date of issue/Date of revision</b>	: 24/3/2018	<b>Date of previous issue</b>	: 13/7/2016.	<b>Version</b>	: 8	10/21
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by absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains Hexamethylene diisocyanate, oligomers, hexamethylene-di-isocyanate. May produce an allergic reaction.

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure	
Hexamethylene diisocyanate, oligomers	LC50 Inhalation Dusts and mists	Rat - Male, Female	1.5 mg/l	4 hours	
	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-	
	LD50 Oral	Rat - Female	>5000 mg/kg	-	
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]	LC50 Inhalation Vapour	Rat - Male, Female	>5.61 mg/l ***TO BE TRANSLATED***	4 hours	
	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-	
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	
	xylene	LC50 Inhalation Vapour	Rat - Male	29.7 mg/l	4 hours
		LD50 Dermal	Rabbit	>4200 mg/kg	-
	ethylbenzene	LD50 Oral	Rat - Male	3523 mg/kg	-
LC50 Inhalation Vapour		Rat	17.4 mg/l	4 hours	
LD50 Dermal		Rabbit - Male	15400 mg/kg	-	
hexamethylene-di-isocyanate	LD50 Oral	Rat - Male, Female	3500 mg/kg	-	
	LC50 Inhalation Vapour	Rat - Male, Female	0.124 mg/l	4 hours	
	LD50 Dermal	Rat - Male, Female	>7000 mg/kg	-	
	LD50 Oral	Rat - Male	746 mg/kg	-	

: Not available.

**Acute toxicity estimates**

Route	ATE value
Dermal	14365.9 mg/kg
Inhalation (vapours)	42.25 mg/l
Inhalation (dusts and mists)	1.856 mg/l

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexamethylene diisocyanate, oligomers	Skin - Mild irritant	Rabbit	-	-	-
	Skin - Erythema/Eschar	Rabbit	1.33	-	-
	Skin - Oedema	Rabbit	1	-	-
	Eyes - Mild irritant	Rabbit	-	-	-
	Eyes - Cornea opacity	Rabbit	0	-	-
	Eyes - Iris lesion	Rabbit	0	-	-
	Eyes - Redness of the conjunctivae	Rabbit	1	-	-
	Eyes - Oedema of the conjunctivae	Rabbit	0.33	-	-
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]	Skin - Irritant	Rabbit	-	-	-
	Eyes - Mild irritant	Rabbit	-	-	-
	xylylene	Rabbit	-	-	-
	ethylbenzene	Rabbit	-	-	-
	hexamethylene-di-isocyanate	Rabbit	-	4 hours	24 hours
	xylylene	Rabbit	-	-	-
	ethylbenzene	Rabbit	-	-	-
	hexamethylene-di-isocyanate	Rabbit	-	-	-
	hexamethylene-di-isocyanate	Rabbit	-	-	-
	hexamethylene-di-isocyanate	Rabbit	-	-	-

**Conclusion/Summary** : Not available.**Sensitisation**

Product/ingredient name	Route of exposure	Species	Result
Hexamethylene diisocyanate, oligomers	skin	Guinea pig	Sensitising
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]	Respiratory	Guinea pig	Not sensitizing
	skin	Guinea pig	Not sensitizing
hexamethylene-di-isocyanate	skin	Guinea pig	Sensitising

**Conclusion/Summary** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
Hexamethylene diisocyanate, oligomers	Category 3	Not applicable.	Respiratory tract irritation
Solvent naphtha (petroleum), light arom.	Category 3	Not applicable.	Respiratory tract irritation
xylene	Category 3	Not applicable.	Respiratory tract irritation
hexamethylene-di-isocyanate	Category 3	Not applicable.	Respiratory tract irritation

**Specific target organ toxicity (repeated exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	Not determined	hearing organs

**Aspiration hazard**

**Date of issue/Date of revision** : 24/3/2018 **Date of previous issue** : 13/7/2016. **Version** : 8 13/21



Product/ingredient name	Result
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]	ASPIRATION HAZARD - Category 1
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

Other information : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

There are no data available on the mixture itself.  
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure
Hexamethylene diisocyanate, oligomers	Acute EC50 >1000 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 127 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >100 mg/l Fresh water	Fish - Danio rerio	96 hours
	Chronic EC10 370 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]	Acute EC50 3.1 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 4.5 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 8.2 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 0.5 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
xylene	Chronic NOEC 2.6 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute EC50 4.36 mg/l ***TO BE TRANSLATED*** Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 1 mg/l ***TO BE TRANSLATED*** Fresh water	Daphnia - Daphnia magna	24 hours
	Acute LC50 4.2 mg/l ***TO BE TRANSLATED*** Fresh water	Fish - Oncorhynchus mykiss	96 hours

Date of issue/Date of revision : 24/3/2018 Date of previous issue : 13/7/2016. Version : 8 14/21



ethylbenzene	Chronic EC10 1.9 mg/l ***TO BE TRANSLATED*** Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Chronic NOEC 1.17 mg/l ***TO BE TRANSLATED*** Fresh water	Daphnia - Ceriodaphnia dubia	7 days
	Chronic NOEC >1.3 mg/l Fresh water	Fish - Oncorhynchus mykiss	56 days
hexamethylene-di-isocyanate	Acute EC50 7.7 mg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 3.6 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 1.81 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.49 mg/l Marine water	Crustaceans - Crago franciscorium	96 hours
	Acute LC50 5.1 mg/l Marine water	Fish - Menidia menidia	96 hours
	Acute LC50 12.1 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
Acute EC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours	
Acute LC50 >100 mg/l Fresh water	Fish - Danio rerio	96 hours	
Chronic NOEC 11.7 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours	

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Hexamethylene diisocyanate, oligomers	-	1 % - 28 days	-	-
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]	-	77.1 % - 28 days	-	-
xylene	-	87.8 % - 28 days	-	-
ethylbenzene	-	79 % - 28 days	-	-
hexamethylene-di-isocyanate	-	42 % - 28 days	-	-

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hexamethylene diisocyanate, oligomers	-	-	Not readily
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]	-	-	Readily
xylene	-	-	Readily
ethylbenzene	-	-	Readily
hexamethylene-di-isocyanate	-	-	Not readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Hexamethylene diisocyanate, oligomers	5.54	3.61	low
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified; [A complex combination of hydrocarbons obtained from distillation of aromatic streams. It consists predominantly of aromatic hydrocarbons having carbon numbers predominantly in the range of C8 through C10 and boiling in the range of approximately 135°C to 210°C (275°F to 410°F).]	-	10 to 2500	high
xylene	3.12	<25.9	low
ethylbenzene	3.6	1	low
hexamethylene-di-isocyanate	0.02	57.6	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.  
**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

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

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Do not allow to enter drains or watercourses. Residues in empty containers should be neutralised with a decontaminant (see section 6).

Dispose of according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

For further information, contact your local waste authority.

### 13.1 Waste treatment methods

#### Product




- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
- Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.
- European waste catalogue (EWC)** :

Waste code	Waste designation
EWC 08 05 01*	waste isocyanates

#### Packaging

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Disposal considerations** : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.
- Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3 	3 	3 
14.4 Packing group	III	III	III
14.5 Environmental hazards	No.	No.	No.
Additional information	<b>Special provisions</b> 640 (E)  <b>Tunnel code</b> (D/E)	-	-

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** : Not available.

## SECTION 15: Regulatory information

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

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Other EU regulations**

**Europe inventory** : All components are listed or exempted.

**Ozone depleting substances (1005/2009/EU)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Seveso Directive**

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

**National regulations**

**Industrial use** : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Inform Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**International lists**

**National inventory**

**Australia** : All components are listed or exempted.  
**Canada** : All components are listed or exempted.  
**China** : All components are listed or exempted.  
**Japan** : **Japan inventory (ENCS)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.  
**Malaysia** : All components are listed or exempted.  
**New Zealand** : All components are listed or exempted.  
**Philippines** : All components are listed or exempted.

<i>Date of issue</i> / <i>Date of revision</i>	: 24/3/2018	<i>Date of previous issue</i>	: 13/7/2016.	<i>Version</i>	: 8	19/21
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**Republic of Korea** : All components are listed or exempted.  
**Taiwan** : Not determined.  
**Turkey** : Not determined.  
**United States** : All components are listed or exempted.

**15.2 Chemical safety assessment** : No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

**CEPE code** : 5

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412	On basis of test data Calculation method Calculation method Calculation method Calculation method

### Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
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.
H373 (hearing organs)	May cause damage to organs through prolonged or repeated exposure. (hearing organs)
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

### Full text of classifications [CLP/GHS]

**Date of issue/Date of revision** : 24/3/2018 **Date of previous issue** : 13/7/2016. **Version** : 8 20/21



Acute Tox. 1, H330 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Chronic 2, H411 Aquatic Chronic 3, H412 Asp. Tox. 1, H304 EUH066 Eye Irrit. 2, H319 Flam. Liq. 2, H225 Flam. Liq. 3, H226 Resp. Sens. 1, H334 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT RE 2, H373 (hearing organs)  STOT SE 3, H335	ACUTE TOXICITY (inhalation) - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 LONG-TERM AQUATIC HAZARD - Category 2 LONG-TERM AQUATIC HAZARD - Category 3 ASPIRATION HAZARD - Category 1 Repeated exposure may cause skin dryness or cracking. SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3 RESPIRATORY SENSITIZATION - Category 1 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
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**Notice to reader**

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.