

# SAFETY DATA SHEET

Date of issue/Date of revision : 21 February 2020 Version : 10.07



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

### 1.1 Product identifier

**Product name** : SIGMALINE 855 REPAIR HARDENER

**Product code** : 00186169

**Other means of identification**

Not available.

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

**Product use** : Professional applications, Used by spraying.

**Use of the substance/mixture** : Coating.

**Uses advised against** : Product is not intended, labelled or packaged for consumer use.

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

PPG Coatings Belgium BV/SRL  
Tweemontstraat 104  
B-2100 Deurne  
Belgium  
Telephone +32-33606311  
Fax +32-33606435

**e-mail address of person responsible for this SDS** : PMC.Safety@PPG.com

### 1.4 Emergency telephone number

**Supplier**

+31 20 4075210

## 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 Irrit. 2, H315

Eye Irrit. 2, H319

Resp. Sens. 1, H334

Skin Sens. 1, H317

Carc. 2, H351

STOT SE 3, H335

STOT RE 2, H373

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.

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## SECTION 2: Hazards identification

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

### 2.2 Label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: Flammable liquid and vapour.  
Harmful if inhaled.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Suspected of causing cancer.  
May cause respiratory irritation.  
May cause damage to organs through prolonged or repeated exposure.

### Precautionary statements

Prevention

: Wear protective gloves. Wear protective clothing. Wear eye or face protection. Wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapour.

Response

: IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

: Store in a well-ventilated place. Keep cool.

Disposal

: Not applicable.

P280, P284, P210, P260, P304 + P340, P342 + P311, P303 + P361 + P353, P305 + P351 + P338, P403, P235

Hazardous ingredients

: Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylidene-trimethanol  
Isocyanic acid, polymethylenepolyphenylene ester  
4,4'-methylenediphenyl diisocyanate  
o-(p-isocyanatobenzyl)phenyl isocyanate  
2,2'-methylenediphenyl diisocyanate  
Additives  
m-tolylidene diisocyanate

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.

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## SECTION 2: Hazards identification

### 2.3 Other hazards

- Product meets the criteria for PBT or vPvB** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
- Other hazards which do not result in classification** : Prolonged or repeated contact may dry skin and cause irritation.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	% by weight	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylidenetriethanol	EC: 500-120-8 CAS: 53317-61-6	≥25 - ≤50	Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]
	REACH #: 01-2119457024-46 CAS: 9016-87-9	≥25 - ≤50	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 (inhalation)	[1] [2]
4,4'-methylenediphenyl diisocyanate	REACH #: 01-2119457014-47 EC: 202-966-0 CAS: 101-68-8 Index: 615-005-00-9	≥10 - ≤25	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373	[1] [2]
2-methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≥5.0 - ≤10	Flam. Liq. 3, H226	[2]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥5.0 - ≤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]
o-(p-isocyanatobenzyl)phenyl isocyanate	REACH #: 01-2119480143-45 EC: 227-534-9 CAS: 5873-54-1 Index: 615-005-00-9	≥5.0 - <10	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373	[1] [2]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1.0 - ≤5.0	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs)	[1] [2]

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### SECTION 3: Composition/information on ingredients

2,2'-methylenediphenyl diisocyanate	REACH #: 01-2119927323-43 EC: 219-799-4 CAS: 2536-05-2 Index: 615-005-00-9	≥1.0 - ≤3.7	Asp. Tox. 1, H304 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373	[1] [2]
Additives	CAS: SUB133060	≤0.30	Acute Tox. 4, H312 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335	[1]
m-tolylidene diisocyanate	REACH #: 01-2119454791-34 EC: 247-722-4 CAS: 26471-62-5 Index: 615-006-00-4	≤0.30	Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 Aquatic Chronic 3, H412  <b>See Section 16 for the full text of the H statements declared above.</b>	[1] [2]

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, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Xylene: Several REACH registrations cover the REACH registered substance with xylene isomers, ethylbenzene (and toluene). The other REACH Registrations include: 01-2119555267-33 reaction mass of ethylbenzene and m-xylene and p-xylene, 01-2119486136-34 Aromatic hydrocarbons, C8, 01-2119539452-40 reaction mass of ethylbenzene and xylene.

#### 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
- [6] Additional disclosure due to company policy

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

**SUB codes represent substances without registered CAS Numbers.**

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- 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.

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## SECTION 4: First aid measures

**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

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking
- Ingestion** : No specific data.

### 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.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

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

- Hazards from the substance or mixture** : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon oxides  
nitrogen oxides  
Cyanate and isocyanate.  
hydrogen cyanide

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## SECTION 5: Firefighting measures

### 5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- 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

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.
- Special provisions** : 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). 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.

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## SECTION 6: Accidental release measures

- 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).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

- : Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. 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.

### 7.3 Specific end use(s)

See Section 1.2 for Identified uses.



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## SECTION 8: Exposure controls/personal protection

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).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
isocyanic acid, polymethylenepolyphenylene ester	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). 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.
4,4'-methylenediphenyl diisocyanate	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). 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.
2-methoxy-1-methylethyl acetate	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). Absorbed through skin.</b> STEL: 548 mg/m <sup>3</sup> 15 minutes. STEL: 100 ppm 15 minutes. TWA: 274 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
xylene	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). 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.
o-(p-isocyanatobenzyl)phenyl isocyanate	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). 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.
ethylbenzene	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). 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.
2,2'-methylenediphenyl diisocyanate	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). 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.
m-tolyldiene diisocyanate	<b>EH40/2005 WELs (United Kingdom (UK), 8/2018). 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



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## SECTION 8: Exposure controls/personal protection

documents for methods for the determination of hazardous substances will also be required.

### DNELs

Product/ingredient name	Type	Exposure	Value	Population	Effects	
Isocyanic acid, polymethylenepolyphenylene ester	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	0.1 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Long term Inhalation	0.025 mg/m <sup>3</sup>	General population [Consumers]	Local	
	DNEL	Short term Inhalation	0.05 mg/m <sup>3</sup>	General population [Consumers]	Local	
	4,4'-methylenediphenyl diisocyanate	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Local
		DNEL	Short term Inhalation	0.1 mg/m <sup>3</sup>	Workers	Local
		DNEL	Long term Inhalation	0.025 mg/m <sup>3</sup>	General population [Consumers]	Local
		DNEL	Short term Inhalation	0.05 mg/m <sup>3</sup>	General population [Consumers]	Local
		DNEL	Short term Inhalation	0.1 mg/m <sup>3</sup>	Workers	Systemic
	2-methoxy-1-methylethyl acetate	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Systemic
DNEL		Short term Dermal	50 mg/kg bw/day	Workers	Systemic	
DNEL		Short term Dermal	28.7 mg/cm <sup>2</sup>	Workers	Local	
DNEL		Short term Dermal	25 mg/kg bw/day	General population [Consumers]	Systemic	
DNEL		Short term Inhalation	0.05 mg/m <sup>3</sup>	General population [Consumers]	Systemic	
DNEL		Short term Oral	20 mg/kg bw/day	General population [Consumers]	Systemic	
DNEL		Short term Dermal	17.2 mg/cm <sup>2</sup>	General population [Consumers]	Local	
DNEL		Long term Inhalation	0.025 mg/m <sup>3</sup>	General population [Consumers]	Systemic	
DNEL		Long term Oral	1.67 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	33 mg/m <sup>3</sup>	General population	Local	
xylene	DNEL	Long term Inhalation	33 mg/m <sup>3</sup>	General population	Systemic	
	DNEL	Long term Dermal	54.8 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	153.5 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	275 mg/m <sup>3</sup>	Workers	Systemic	
	DNEL	Short term Inhalation	550 mg/m <sup>3</sup>	Workers	Local	
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	General population	Systemic	
DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	General population	Local		
DNEL	Long term Dermal	125 mg/kg bw/day	General	Systemic		

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o-(p-isocyanatobenzyl)phenyl isocyanate	DNEL	Long term Inhalation	65.3 mg/m <sup>3</sup>	population General population	Systemic
	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	221 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	442 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	442 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	28.7 mg/cm <sup>2</sup>	Workers	Local
	DNEL	Long term Inhalation	0.025 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	0.025 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	0.05 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	0.05 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Systemic
ethylbenzene	DNEL	Short term Inhalation	0.1 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	0.1 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	25 mg/kg bw/day	General population	Systemic
2,2'-methylenediphenyl diisocyanate	DNEL	Short term Dermal	50 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	15 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	77 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	293 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Dermal	28.7 mg/cm <sup>2</sup>	Workers	Local
m-tolylidene diisocyanate	DNEL	Long term Inhalation	0.025 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	0.025 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	0.05 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	0.05 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	0.1 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	0.1 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	25 mg/kg bw/day	General population	Systemic
m-tolylidene diisocyanate	DNEL	Short term Dermal	50 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.035 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	0.035 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	0.14 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	0.14 mg/m <sup>3</sup>	Workers	Systemic

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## SECTION 8: Exposure controls/personal protection

### PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
Isocyanic acid, polymethylenepolyphenylene ester	-	Fresh water	1 mg/l	Assessment Factors
	-	Marine water	0.1 mg/l	Assessment Factors
	-	Sewage Treatment Plant	1 mg/l	Assessment Factors
4,4'-methylenediphenyl diisocyanate	-	Soil	1 mg/kg dwt	Assessment Factors
	-	Fresh water	1 mg/l	Assessment Factors
	-	Marine water	0.1 mg/l	Assessment Factors
	-	Sewage Treatment Plant	1 mg/l	Assessment Factors
2-methoxy-1-methylethyl acetate	-	Soil	1 mg/kg dwt	Assessment Factors
	-	Fresh water	0.635 mg/l	-
	-	Marine water	0.0635 mg/l	-
	-	Fresh water sediment	3.29 mg/kg	-
	-	Marine water sediment	0.329 mg/kg	-
	-	Soil	0.29 mg/kg	-
xylene	-	Sewage Treatment Plant	100 mg/l	-
	-	Fresh water	0.327 mg/l	-
	-	Marine water	0.327 mg/l	-
	-	Sewage Treatment Plant	6.58 mg/l	-
	-	Fresh water sediment	12.46 mg/kg dwt	-
o-(p-isocyanatobenzyl)phenyl isocyanate	-	Marine water sediment	12.46 mg/kg dwt	-
	-	Soil	2.31 mg/kg	-
	-	Fresh water	1 mg/l	Assessment Factors
	-	Marine water	0.1 mg/l	Assessment Factors
ethylbenzene	-	Sewage Treatment Plant	1 mg/l	Assessment Factors
	-	Soil	1 mg/kg dwt	Equilibrium Partitioning
	-	Fresh water	0.1 mg/l	Assessment Factors
	-	Marine water	0.01 mg/l	Assessment Factors
	-	Sewage Treatment Plant	9.6 mg/l	Assessment Factors
	-	Fresh water sediment	13.7 mg/kg dwt	Equilibrium Partitioning
	-	Marine water sediment	1.37 mg/kg dwt	Equilibrium Partitioning
	-	Soil	2.68 mg/kg dwt	Equilibrium Partitioning
2,2'-methylenediphenyl diisocyanate	-	Secondary Poisoning	20 mg/kg	-
	-	Fresh water	1 mg/l	Assessment Factors
	-	Marine water	0.1 mg/l	Assessment Factors
	-	Sewage Treatment Plant	1 mg/l	Assessment Factors
m-tolidene diisocyanate	-	Soil	1 mg/kg dwt	Assessment Factors
	-	Fresh water	0.013 mg/l	Assessment Factors
	-	Marine water	0.00125 mg/l	Assessment Factors
	-	Sewage Treatment Plant	1 mg/l	Assessment Factors
	-	Soil	1 mg/kg dwt	Equilibrium Partitioning

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## SECTION 8: Exposure controls/personal protection

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- 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** : Chemical splash goggles. Use eye protection according to EN 166.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. 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.
- Gloves** : polyethylene butyl rubber
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- 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. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3
- Restrictions on use** : 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.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	: Liquid.
Colour	: Various
Odour	: Amine-like.
Odour threshold	: Not available.
pH	: insoluble in water.
Melting point/freezing point	: May start to solidify at the following temperature: 41.83°C (107.3°F) This is based on data for the following ingredient: 2,2'-methylene-diphenyl diisocyanate. Weighted average: -71.89°C (-97.4°F)
Initial boiling point and boiling range	: >37.78°C
Flash point	: Closed cup: 31°C
Evaporation rate	: Highest known value: 0.84 (ethylbenzene) Weighted average: 0.78 compared with butyl acetate
Flammability (solid, gas)	: liquid
Upper/lower flammability or explosive limits	: Greatest known range: Lower: 0.8% Upper: 6.7% (xylene)
Vapour pressure	: Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted average: 0.24 kPa (1.8 mm Hg) (at 20°C)
Vapour density	: Highest known value: 4.6 (Air = 1) (2-methoxy-1-methylethyl acetate). Weighted average: 4.15 (Air = 1)
Relative density	: 1.19
Solubility(ies)	: Insoluble in the following materials: cold water.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Lowest known value: 333°C (631.4°F) (2-methoxy-1-methylethyl acetate).
Decomposition temperature	: Stable under recommended storage and handling conditions (see Section 7).
Viscosity	: Kinematic (room temperature): >4 cm <sup>2</sup> /s Kinematic (40°C): >0.21 cm <sup>2</sup> /s
Viscosity	: 60 - 100 s (ISO 6mm)
Explosive properties	: The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible.
Oxidising properties	: Product does not present an oxidizing hazard.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: The product is stable.
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: In a fire, hazardous decomposition products may be produced.

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## SECTION 10: Stability and reactivity

Refer to protective measures listed in sections 7 and 8.

**10.5 Incompatible materials** : Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.

**10.6 Hazardous decomposition products** : Depending on conditions, decomposition products may include the following materials: Cyanate and isocyanate. carbon oxides nitrogen oxides hydrogen cyanide

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylenedimethanol and propylenedimethanol	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>9400 mg/kg	-
Isocyanic acid, polymethylenepolyphenylene ester	LD50 Oral	Rat	49 g/kg	-
	LD50 Oral	Rat	9200 mg/kg	-
4,4'-methylenediphenyl diisocyanate	LD50 Oral	Rat	9200 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
2-methoxy-1-methylethyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rabbit	>1.7 g/kg	-
xylene	LD50 Oral	Rat	4.3 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
Additives	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Dermal	Rabbit - Male	1410 mg/kg	-
m-tolyldiene diisocyanate	LD50 Oral	Rat	2200 mg/kg	-
	LC50 Inhalation Vapour	Rat	0.48 mg/l	1 hours
	LD50 Dermal	Rabbit	>9440 mg/kg	-
	LD50 Oral	Rat	5.8 g/kg	-

**Conclusion/Summary** : There are no data available on the mixture itself.

#### Acute toxicity estimates

Route	ATE value
Dermal	16736.4 mg/kg
Inhalation (vapours)	66.55 mg/l
Inhalation (dusts and mists)	3.02 mg/l

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
4,4'-methylenediphenyl diisocyanate	Skin - Irritant	Rabbit	-	-	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
xylene					

#### Conclusion/Summary

**Skin** : There are no data available on the mixture itself.

**Eyes** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

#### Sensitisation



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## SECTION 11: Toxicological information

Product/ingredient name	Route of exposure	Species	Result
4,4'-methylenediphenyl diisocyanate	skin Respiratory	Mouse Guinea pig	Sensitising Sensitising

### Conclusion/Summary

**Skin** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

### Mutagenicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
4,4'-methylenediphenyl diisocyanate	Positive - Inhalation - TC	Rat	0 to 6 mg/m <sup>3</sup>	2 years; 5 days per week

**Conclusion/Summary** : There are no data available on the mixture itself.

### Reproductive toxicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Teratogenicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
isocyanic acid, polymethylenepolyphenylene ester	Category 3	Not applicable.	Respiratory tract irritation
4,4'-methylenediphenyl diisocyanate	Category 3	Not applicable.	Respiratory tract irritation
xylene	Category 3	Not applicable.	Respiratory tract irritation
o-(p-isocyanatobenzyl)phenyl isocyanate	Category 3	Not applicable.	Respiratory tract irritation
2,2'-methylenediphenyl diisocyanate	Category 3	Not applicable.	Respiratory tract irritation
Additives	Category 3	Not applicable.	Respiratory tract irritation
m-tolylidene diisocyanate	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
isocyanic acid, polymethylenepolyphenylene ester	Category 2	Inhalation	Not determined
4,4'-methylenediphenyl diisocyanate	Category 2	Not determined	Not determined
o-(p-isocyanatobenzyl)phenyl isocyanate	Category 2	Not determined	Not determined
ethylbenzene	Category 2	Not determined	hearing organs
2,2'-methylenediphenyl diisocyanate	Category 2	Not determined	Not determined

### Aspiration hazard

Product/ingredient name	Result
xylene ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

**Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Ingestion** : No known significant effects or critical hazards.

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**Skin contact** : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.

**Eye contact** : Causes serious eye irritation.

### Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation** : Adverse symptoms may include the following:  
 respiratory tract irritation  
 coughing  
 wheezing and breathing difficulties  
 asthma

**Ingestion** : No specific data.

**Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
 dryness  
 cracking

**Eye contact** : Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary** : Not available.

**General** : May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Other information** : Not available.

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.

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## SECTION 11: Toxicological information

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 Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylidene-trimethanol, Isocyanic acid, polymethylenepolyphenylene ester, 4,4'-methylenediphenyl diisocyanate, o-(p-isocyanatobenzyl)phenyl isocyanate, 2,2'-methylenediphenyl diisocyanate, Additives, m-tolyldiene diisocyanate. May produce an allergic reaction.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2-methoxy-1-methylethyl acetate	Acute LC50 161 mg/l Fresh water	Fish	96 hours
ethylbenzene	Acute LC50 150 to 200 mg/l Fresh water	Fish	96 hours
Additives	LC50 134 mg/l	Fish - Pimephales promelas	96 hours
m-tolyldiene diisocyanate	Acute EC50 12.5 mg/l	Daphnia	48 hours

**Conclusion/Summary** : There are no data available on the mixture itself.

### 12.2 Persistence and degradability

**Conclusion/Summary** : There are no data available on the mixture itself.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
ethylbenzene	-	-	Readily
m-tolyldiene diisocyanate	-	-	Not readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-methoxy-1-methylethyl acetate	0.56	-	low
xylene	3.16	7.4 to 18.5	low
ethylbenzene	3.15	79.43	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

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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## SECTION 12: Ecological information

**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).

### 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** : Yes.

#### European waste catalogue (EWC)

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

#### 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.

Type of packaging	European waste catalogue (EWC)
Container	15 01 06 mixed packaging

**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.

## 14. Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	UN1263	UN1263	UN1263	UN1263
<b>14.2 UN proper shipping name</b>	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
<b>14.3 Transport hazard class(es)</b>	3	3	3	3
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Marine pollutant substances</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.

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## 14. Transport information

### Additional information

- ADR/RID** : This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1.
- Tunnel code** : (D/E)
- ADN** : This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1.
- IMDG** : This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.
- IATA** : None identified.

**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 applicable.

## 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.

Ozone depleting substances (1005/2009/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

**Category**

P5c

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

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## SECTION 16: Other information

✔ 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]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 PBT = Persistent, Bioaccumulative and Toxic  
 vPvB = Very Persistent and Very Bioaccumulative  
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
 IMDG = International Maritime Dangerous Goods  
 IATA = International Air Transport Association

### 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 Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373	On basis of test data Calculation method Calculation method Calculation method Calculation method 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.
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.
H351	Suspected of causing cancer.
H373 (inhalation)	May cause damage to organs through prolonged or repeated exposure if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

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



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## SECTION 16: Other information

Acute Tox. 1, H330	ACUTE TOXICITY (inhalation) - Category 1
Acute Tox. 4, H312	ACUTE TOXICITY (dermal) - Category 4
Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Aquatic Chronic 3, H412	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
Carc. 2, H351	CARCINOGENICITY - Category 2
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Resp. Sens. 1, H334	RESPIRATORY SENSITISATION - Category 1
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317	SKIN SENSITISATION - Category 1
STOT RE 2, H373 (inhalation)	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (inhalation) - Category 2
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

### History

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Prepared by : EHS

Version : 10.07

### Disclaimer

*The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by us, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.*