

## **KMK 4325 SLOW HARDENER**

Version  
2.1

Revision Date:  
04.03.2019

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

#### **1.1 Product identifier**

Trade name : KMK 4325 SLOW HARDENER

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

Use of the Substance/Mixture : Curing chemical

Recommended restrictions on use : For use in industrial installations or professional treatment only.

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

Company : Kimakem srl  
Via Don G. Fortuna 82  
36050 Monteviale-Vicenza  
Italia

Telephone : +39 0444 1220020

E-mail address of person responsible for the SDS : info@kimakem.com

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

+39 0444 1220020 (Mon to Fri - 8:30 to 17:30)

### **SECTION 2: Hazards identification**

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

##### **Classification (REGULATION (EC) No 1272/2008)**

Flammable liquids, Category 3 H226: Flammable liquid and vapour.

Skin irritation, Category 2 H315: Causes skin irritation.

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Specific target organ toxicity - single exposure, Category 3, Central nervous system H336: May cause drowsiness or dizziness.

Aspiration hazard, Category 1 H304: May be fatal if swallowed and enters airways.

Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting effects.

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### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

:



Signal word

:

Danger

Hazard statements

:

H226 Flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H336 May cause drowsiness or dizziness.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

:

#### Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P260 Do not breathe vapours.  
P260 Do not breathe spray.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P331 Do NOT induce vomiting.

#### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

HDI oligomers, isocyanurate  
Hydrocarbons, C9, aromatics  
xylene (mixture of isomers)  
n-butyl acetate

#### Additional Labelling

EUH204 Contains isocyanates. May produce an allergic reaction.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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

Chemical nature : Paint

**Hazardous components**

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
HDI oligomers, isocyanurate	28182-81-2 500-060-2 01-2119485796-17	Acute Tox. 4; H332 Skin Sens. 1; H317 STOT SE 3; H335	>= 30 - < 50
Hydrocarbons, C9, aromatics	Not Assigned 918-668-5 01-2119455851-35	Flam. Liq. 3; H226 Asp. Tox. 1; H304 STOT SE 3; H335 STOT SE 3; H336, EUH066 Aquatic Chronic 2; H411	>= 20 - < 25
xylene (mixture of isomers)	1330-20-7 215-535-7 601-022-00-9 01-2119488216-32	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT RE 2; H373 Asp. Tox. 1; H304	>= 1 - < 10
n-butyl acetate	123-86-4 204-658-1 607-025-00-1 01-2119485493-29	Flam. Liq. 3; H226 STOT SE 3; H336 EUH066	>= 1 - < 10
Solvent naphtha (petroleum), light arom.	64742-95-6 265-199-0 649-356-00-4	Flam. Liq. 3; H226 STOT SE 3; H335 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 1 - < 2.5
ethylbenzene	100-41-4 202-849-4 601-023-00-4 01-2119489370-35	Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Chronic 3; H412	>= 1 - < 2.5
Substances with a workplace exposure limit :			
2-methoxy-1-methylethyl acetate	108-65-6 203-603-9 607-195-00-7 01-2119475791-29	Flam. Liq. 3; H226 STOT SE 3; H336	>= 20 - < 30

For explanation of abbreviations see section 16.

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### **SECTION 4: First aid measures**

#### **4.1 Description of first aid measures**

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Symptoms of poisoning may appear several hours later.  
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.  
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do NOT induce vomiting.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.

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

- Symptoms : Inhalation may provoke the following symptoms:  
Headache  
Vertigo  
Fatigue  
Skin contact may provoke the following symptoms:  
Redness  
Ingestion may provoke the following symptoms:  
Abdominal pain  
Vomiting  
Diarrhoea

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

- Treatment : In case of ingestion, the stomach should be emptied by gastric lavage under qualified medical supervision.

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### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : High volume water jet

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

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

#### **5.3 Advice for firefighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.  
For safety reasons in case of fire, cans should be stored separately in closed containments.  
Use a water spray to cool fully closed containers.

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

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

Personal precautions : Use personal protective equipment.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

#### **6.2 Environmental precautions**

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

### **6.4 Reference to other sections**

For contact information in case of emergency, see section 1. For information on safe handling, see section 7. For exposure controls and personal protection measures, see section 8. For subsequent waste disposal, follow the recommendations in section 13.

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

### **7.1 Precautions for safe handling**

Advice on safe handling : Avoid formation of aerosol.  
Do not breathe vapours/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Take precautionary measures against static discharges.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Open drum carefully as content may be under pressure.  
Dispose of rinse water in accordance with local and national regulations.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.  
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : When using do not eat or drink. When using do not smoke.  
Wash hands before breaks and at the end of workday.

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

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Storage period : 12 Months

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Further information on storage stability : No decomposition if stored and applied as directed.

**7.3 Specific end use(s)**

Specific use(s) : For the use of this product do not exist particular recommendations apart from that already indicated.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
HDI oligomers, isocyanurate	28182-81-2	TWA	0.02 mg/m3 (as -NCO)	GB EH40
Further information	<p>Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.</p>			
		STEL	0.07 mg/m3 (as -NCO)	GB EH40

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Further information	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.			
2-methoxy-1-methylethyl acetate	108-65-6	TWA	50 ppm 275 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm 550 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	50 ppm 274 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	100 ppm 548 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
xylene (mixture of isomers)	1330-20-7	TWA	50 ppm 220 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	100 ppm	GB EH40



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			441 mg/m3	
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		TWA	50 ppm 221 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm 442 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
n-butyl acetate	123-86-4	TWA	150 ppm 724 mg/m3	GB EH40
		STEL	200 ppm 966 mg/m3	GB EH40
ethylbenzene	100-41-4	TWA	100 ppm 442 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	200 ppm 884 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	100 ppm 441 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	125 ppm 552 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
HDI oligomers, isocyanurate	28182-81-2	TWA	0.02 mg/m3 (as -NCO)	GB EH40
Further information	<p>Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an</p>			

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	occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.			
		STEL	0.07 mg/m3 (as -NCO)	GB EH40
Further information	Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.			
2-methoxy-1-methylethyl acetate	108-65-6	TWA	50 ppm 275 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm 550 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	50 ppm	GB EH40

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			274 mg/m3	
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	100 ppm 548 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
xylene (mixture of isomers)	1330-20-7	TWA	50 ppm 220 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	100 ppm 441 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		TWA	50 ppm 221 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	100 ppm 442 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
n-butyl acetate	123-86-4	TWA	150 ppm 724 mg/m3	GB EH40
		STEL	200 ppm 966 mg/m3	GB EH40
ethylbenzene	100-41-4	TWA	100 ppm 442 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	200 ppm 884 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	100 ppm 441 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	125 ppm 552 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			

**Biological occupational exposure limits**

Substance name	CAS-No.	Control parameters	Sampling time	Basis
HDI oligomers, isocyanurate	28182-81-2	urinary diamine: 1 µmol/mol creatinine (Urine)	Post task	GB EH40 BAT

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

Substance name	End Use	Exposure routes	Potential health effects	Value

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2-methoxy-1-methylethyl acetate	Workers	Inhalation	Long-term systemic effects	275 mg/m <sup>3</sup>
xylene	Workers	Inhalation	Long-term systemic effects	77 mg/m <sup>3</sup>
n-butyl acetate	Workers	Inhalation	Long-term systemic effects	480 mg/m <sup>3</sup>
Low boiling point naphtha - unspecified	Workers	Inhalation	Long-term systemic effects	608 mg/m <sup>3</sup>
ethylbenzene	Workers	Inhalation	Long-term systemic effects	77 mg/m <sup>3</sup>

**8.2 Exposure controls**

**Personal protective equipment**

- Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles
- Hand protection  
Material : Solvent-resistant gloves
- Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

**SECTION 9: Physical and chemical properties**

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

- Appearance : liquid
- Colour : colourless
- Odour : characteristic
- pH : Not applicable
- Melting point/range : not determined
- Boiling point/boiling range : not determined
- Flash point : 38 °C  
Method: ISO 1523, closed cup  
Setaflash
- Upper explosion limit / Upper flammability limit : not determined

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Lower explosion limit / Lower flammability limit	:	not determined
Vapour pressure	:	not determined
Density	:	1.004 g/cm <sup>3</sup> (20 °C) Method: ISO 2811-1
Solubility(ies) Water solubility	:	immiscible
Viscosity Viscosity, dynamic	:	24 mPa.s (20 °C) Method: ISO 2555
Viscosity, kinematic	:	< 20.5 mm <sup>2</sup> /s (40 °C)

### 9.2 Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No decomposition if stored and applied as directed.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.  
Vapours may form explosive mixture with air.

### 10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

### 10.5 Incompatible materials

Materials to avoid : No data available

### 10.6 Hazardous decomposition products

No data available

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

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Acute inhalation toxicity : Acute toxicity estimate: 10 - 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

Acute toxicity estimate: > 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

### **Components:**

#### **HDI oligomers, isocyanurate:**

Acute oral toxicity : LD50 Oral (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 0.543 mg/l  
Exposure time: 4 h  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402

#### **Hydrocarbons, C9, aromatics:**

Acute oral toxicity : LD50 Oral (Rat): 8,400 mg/kg

Acute inhalation toxicity : LC50 (Rat): 3400 ppm  
Exposure time: 4 h  
Test atmosphere: vapour

#### **xylene (mixture of isomers):**

Acute oral toxicity : LD50 Oral (Rat): 4,300 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 22.08 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403

Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg  
Method: Converted acute toxicity point estimate

#### **n-butyl acetate:**

Acute oral toxicity : LD50 Oral (Rat): 10,768 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 23.4 mg/l

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Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 17,600 mg/kg  
Method: OECD Test Guideline 402

### **Solvent naphtha (petroleum), light arom.:**

Acute oral toxicity : LD50 Oral (Rat): 3,592 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 3,160 mg/kg  
Method: OECD Test Guideline 402

### **ethylbenzene:**

Acute oral toxicity : LD50 Oral (Rat): 3,500 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 17.4 mg/l  
Exposure time: 4 h  
Test atmosphere: gas  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 15,400 mg/kg  
Method: OECD Test Guideline 402

### **2-methoxy-1-methylethyl acetate:**

Acute oral toxicity : LD50 Oral (Rat): 8,532 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 35.7 mg/l  
Exposure time: 4 h  
Test atmosphere: gas  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): 5,000 mg/kg  
Method: OECD Test Guideline 402

### **Skin corrosion/irritation**

#### **Product:**

Result: Skin irritation

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### **Serious eye damage/eye irritation**

**Product:**

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

### **Respiratory or skin sensitisation**

**Product:**

Result: May cause sensitisation by skin contact.

### **Germ cell mutagenicity**

**Product:**

Germ cell mutagenicity-  
Assessment : Based on available data, the classification criteria are not met.

### **Carcinogenicity**

**Product:**

Carcinogenicity -  
Assessment : Based on available data, the classification criteria are not met.

### **Reproductive toxicity**

**Product:**

Reproductive toxicity -  
Assessment : Based on available data, the classification criteria are not met.

### **STOT - single exposure**

**Product:**

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

### **STOT - repeated exposure**

**Product:**

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

### **Aspiration toxicity**

**Product:**

May be fatal if swallowed and enters airways.

### **Further information**

**Product:**

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



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### **SECTION 12: Ecological information**

#### **12.1 Toxicity**

##### **Components:**

##### **HDI oligomers, isocyanurate:**

Toxicity to algae : EC50 (Algae): 370 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

##### **Hydrocarbons, C9, aromatics:**

Toxicity to fish : LC50 (Fish): 9.22 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia (water flea)): 6.14 mg/l  
aquatic invertebrates Exposure time: 48 h

##### **xylene (mixture of isomers):**

Toxicity to fish : LC50 (Fish): 14 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia (water flea)): 16 mg/l  
aquatic invertebrates Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): > 10 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

##### **n-butyl acetate:**

Toxicity to fish : LC50 (Fish): 18 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia (water flea)): 32 mg/l  
aquatic invertebrates Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 675 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

##### **Solvent naphtha (petroleum), light arom.:**

Toxicity to fish : LC50 (Fish): 9.2 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

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Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 3.2 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 2.9 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

### **ethylbenzene:**

Toxicity to fish : LC50 (Fish): 12 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 1.8 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 33 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

### **2-methoxy-1-methylethyl acetate:**

Toxicity to fish : LC50 (Fish): 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 408 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 1,000 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

### **12.2 Persistence and degradability**

No data available

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available

### **12.5 Results of PBT and vPvB assessment**

#### **Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

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### 12.6 Other adverse effects

**Product:**

Additional ecological information

: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product

: The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging

: Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

## SECTION 14: Transport information

### 14.1 UN number

IMDG

: UN 1263

IATA (Cargo)

: UN 1263

### 14.2 UN proper shipping name

ADR

: PAINT RELATED MATERIAL

IMDG

: PAINT RELATED MATERIAL

IATA (Cargo)

: Paint related material

### 14.3 Transport hazard class(es)

ADR

: 3

IMDG

: 3

IATA (Cargo)

: 3

### 14.4 Packing group

ADR

Packing group

: III

Classification Code

: F1

Hazard Identification Number

: 30

Labels

: 3

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Tunnel restriction code : (D/E)

**IMDG**

Packing group : III  
Labels : 3  
EmS Code : F-E, S-E

**IATA (Cargo)**

Packing instruction (cargo aircraft) : 366  
Packing instruction (LQ) : Y344  
Packing group : III  
Labels : Flammable Liquids

**14.5 Environmental hazards**

**ADR**

Environmentally hazardous : no

**IMDG**

Marine pollutant : no

**14.6 Special precautions for user**

Not applicable

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable for product as supplied.

**SECTION 15: Regulatory information**

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
P5c	FLAMMABLE LIQUIDS	5,000 t	50,000 t
34	Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)	2,500 t	25,000 t

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### Other regulations:

The product is classified and labelled in accordance with EC directives or respective national laws.

### 15.2 Chemical safety assessment

The supplier has not carried out evaluation of chemical safety.

## SECTION 16: Other information

### Full text of H-Statements

EUH066	:	Repeated exposure may cause skin dryness or cracking.
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.
H332	:	Harmful if inhaled.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H373	:	May cause damage to organs through prolonged or repeated exposure if inhaled.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

### Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Chronic aquatic toxicity
Asp. Tox.	:	Aspiration hazard
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT	:	UK. Biological monitoring guidance values
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation;

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Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

Sources of key data used to compile the Safety Data Sheet : <http://echa.europa.eu>, <http://eur-lex.europa.eu>

#### Classification of the mixture:

Flam. Liq. 3	H226
Skin Irrit. 2	H315
Skin Sens. 1	H317
STOT SE 3	H336
Asp. Tox. 1	H304
Aquatic Chronic 3	H412

#### Classification procedure:

Based on product data or assessment
Based on product data or assessment
Calculation method
Based on product data or assessment
Based on product data or assessment
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific



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material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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