

# SAFETY DATA SHEET

### FRS HARDENER

## **Section 1. Identification**

**Product identifier** : FRS HARDENER

**SDS code** : 21040000D

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

Recommended use

Paint. Professional use Industrial use

Restrictions on use

All other uses

**Product use** : Filler for interior use

Supplier's details

MAPAERO SAS

10, Avenue de la Rijole CS30098

09103 PAMIERS Cedex

France

Emergency telephone number (with hours of

operation)

: +33 (0)5 34 01 34 01 +33 (0)5 61 60 23 30

### Section 2. Hazard identification

Classification of the substance or mixture

: FLAMMABLE LIQUIDS - Category 3

ACUTE TOXICITY (inhalation) - Category 4

SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

**GHS label elements** 

Hazard pictograms







Signal word : Warning

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### Section 2. Hazard identification

#### **Hazard statements**

: Fammable liquid and vapor.

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Harmful if inhaled.

May cause respiratory irritation. Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure. (hearing

organs)

#### **Precautionary statements**

Prevention : Øbtain special instructions before use. Wear protective gloves, protective clothing

and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapor. Wash hands

thoroughly after handling.

Response : F exposed or concerned: Get medical advice or attention. IF INHALED: Call a

POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Continue rinsing. If eye irritation persists: Get medical advice or attention.Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national

and international regulations.

# Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Other means of identification

**Storage** 

: Not available.

Ingredient name	% (w/w)	CAS number	
Fexamethylene diisocyanate, oligomers	≥60 - ≤80	28182-81-2	
2-methoxy-1-methylethyl acetate	≥10 - ≤30	108-65-6	
xylene	≥10 - ≤30	1330-20-7	
ethylbenzene	≥1 - ≤5	100-41-4	

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

### Section 4. First-aid measures

### <u>Description of necessary first aid measures</u>

**Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower

eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. Get medical attention.

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### Section 4. First-aid measures

#### Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.

Skin contact

: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

### Potential acute health effects

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

**Inhalation**: Harmful if inhaled. May cause respiratory irritation.

**Skin contact**: Causes skin irritation. 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

**Skin contact**: Adverse symptoms may include the following:

irritation redness

**Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

**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.

**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.

#### See toxicological information (Section 11)

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## Section 5. Fire-fighting measures

### 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.

Specific hazards arising from the chemical

: Flammable liquid and vapor. 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 thermal decomposition products

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides

Special protective actions 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.

### Section 6. Accidental release measures

### 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized 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".

**Environmental precautions** 

: Avoid dispersal of spilled 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).

### Methods and materials 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 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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# Section 7. Handling and storage

### Precautions for safe handling

#### Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. 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 only non-sparking tools. Take precautionary measures against electrostatic discharges. 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.

# including any incompatibilities

Conditions for safe storage, : 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 wellventilated 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

### **Control parameters**

### Occupational exposure limits

Ingredient name	Exposure limits
⊮examethylene diisocyanate, oligomers	CA Quebec Provincial (Canada, 6/2021).
	[Isocyanate oligomers] Skin sensitizer.
2-methoxy-1-methylethyl acetate	CA British Columbia Provincial (Canada,
	7/2018).
	TWA: 50 ppm 8 hours.
	STEL: 75 ppm 15 minutes.
	CA Ontario Provincial (Canada, 1/2018).
	TWA: 270 mg/m <sup>3</sup> 8 hours.
	TWA: 50 ppm 8 hours.
xylene	CA Alberta Provincial (Canada, 6/2018).
	[Dimethylbenzene]
	15 min OEL: 651 mg/m³ 15 minutes.
	15 min OEL: 150 ppm 15 minutes.
	8 hrs OEL: 434 mg/m <sup>3</sup> 8 hours.
	8 hrs OEL: 100 ppm 8 hours.
	CA British Columbia Provincial (Canada,
	3/2022). [Xylene (o, m & p isomers)]
	STEL: 150 ppm 15 minutes.
	TWA: 100 ppm 8 hours.
	CA Quebec Provincial (Canada, 6/2021).
	[Xylene]
	STEV: 651 mg/m³ 15 minutes.
	STEV: 150 ppm 15 minutes.
	TWAEV: 434 mg/m <sup>3</sup> 8 hours.

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ethylbenzene

# Section 8. Exposure controls/personal protection

TWAEV: 100 ppm 8 hours.

CA Ontario Provincial (Canada, 6/2019).

[Xylene (o-, m-, p-isomers)] STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.

CA Saskatchewan Provincial (Canada,

7/2013). [Xylene]

STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.

CA Alberta Provincial (Canada, 6/2018).

15 min OEL: 543 mg/m³ 15 minutes. 15 min OEL: 125 ppm 15 minutes. 8 hrs OEL: 434 mg/m³ 8 hours. 8 hrs OEL: 100 ppm 8 hours.

CA British Columbia Provincial (Canada,

3/2022).

TWA: 20 ppm 8 hours.

CA Ontario Provincial (Canada, 6/2019).

TWA: 20 ppm 8 hours.

CA Quebec Provincial (Canada, 6/2021).

TWAEV: 20 ppm 8 hours.

CA Saskatchewan Provincial (Canada, 7/2013).

STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours.

# 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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

# 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.

### **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

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### **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.

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# Section 8. Exposure controls/personal protection

**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.

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

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

# Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### **Appearance**

Physical state : Liquid.
Color : Colorless.
Odor : Characteristic.
Odor threshold : Not available.

pH : Not available. [DIN EN 1262]

Melting point/freezing point : Not available.

Boiling point, initial boiling : Not available.

point, and boiling range

Flash point : Closed cup: 37°C (98.6°F) [Pensky-Martens]

Flammability : Not available.

Lower and upper explosion : Not available.

limit/flammability limit

Vapor pressure

	Va	por Pressur	e at 20°C	Va	por pressur	e at 50°C
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
toluene	23.17	3.1				
ethylbenzene	9.3	1.2				
xylene	6.7	0.89				
2-methoxy-1-methylethyl acetate	2.7	0.36				
hexamethylene-di-isocyanate	0.01	0.0013				
2,6-di-tert-butyl-p-cresol	0.01	0.0013				
Hexamethylene diisocyanate, oligomers	0.000018	0.0000024	EU A.4			

Relative vapor density : Not available.

**Density** : **1**.07 g/cm³ [DIN EN ISO 2811-1]

Solubility(ies) :

Media	Result
<mark>c</mark> old water	Not soluble [OESO (TG 105)]

Partition coefficient: n-

octanol/water

: Not applicable.

Auto-ignition temperature :

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# Section 9. Physical and chemical properties and safety characteristics

Ingredient name	°C	°F	Method
methoxy-1-methylethyl acetate	333	631.4	
xylene	432	809.6	
ethylbenzene	432.22	810	
hexamethylene-di-isocyanate	454	849.2	
toluene	480	896	

**Decomposition temperature**: Not available.

Viscosity : Kinematic (room temperature): 290 mm²/s (290 cSt) [DIN EN ISO 3219]

Kinematic (40°C (104°F)): 101 mm<sup>2</sup>/s (101 cSt) [DIN EN ISO 3219]

**Particle characteristics** 

Median particle size : Not applicable.

### Section 10. Stability and reactivity

**Reactivity**: No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability**: The product is stable.

Possibility of hazardous

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld,

braze, solder, drill, grind or expose containers to heat or sources of ignition.

**Incompatible materials**: Reactive or incompatible with the following materials:

oxidizing materials

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products

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should not be produced.

# **Section 11. Toxicological information**

#### Information on toxicological effects

### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
⊮examethylene	LC50 Inhalation Dusts and mists	Rat	18500 mg/m³	1 hours
diisocyanate, oligomers				
xylene	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Gas.	Rat	6670 ppm	4 hours
	LD50 Intraperitoneal	Mouse	1548 mg/kg	-
	LD50 Intraperitoneal	Mouse	1548 mg/kg	-
	LD50 Intraperitoneal	Rat	2459 mg/kg	-
	LD50 Oral	Mouse	2119 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
	LD50 Subcutaneous	Rat	1700 mg/kg	-
ethylbenzene	LC50 Inhalation Gas.	Rabbit	4000 ppm	4 hours
	LC50 Inhalation Vapor	Mouse	35500 mg/m <sup>3</sup>	2 hours
	LC50 Inhalation Vapor	Rat	55000 mg/m <sup>3</sup>	2 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Dermal	Rabbit	17800 uL/kg	-
	LD50 Intraperitoneal	Mouse	2624 uL/kg	-

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# Section 11. Toxicological information

	LD50 Oral	Rat	3500 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
⊮examethylene	Eyes - Moderate irritant	Rabbit	-	100 mg	-
diisocyanate, oligomers					
	Skin - Moderate irritant	Rabbit	-	500 mg	-
xylene	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5	-
				mg	
	Skin - Mild irritant	Rat	-	8 hours 60 UI	-
	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500	-
				mg	
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15	-
				mg	

### **Sensitization**

Not available.

### **Mutagenicity**

Not available.

### **Carcinogenicity**

Not available.

### **Classification**

Product/ingredient name	IARC	NTP	ACGIH
<b>x</b> ylene	3	-	A4
ethylbenzene	2B	-	A3

### **Reproductive toxicity**

Not available.

### **Teratogenicity**

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Hexamethylene diisocyanate, oligomers  2-methoxy-1-methylethyl acetate xylene	Category 3 Category 3 Category 3	-	Respiratory tract irritation Narcotic effects Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
<b>e</b> thylbenzene	Category 2	-	hearing organs

### **Aspiration hazard**

Name	Result
	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

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# **Section 11. Toxicological information**

Information on the likely

routes of exposure

: Not available.

### Potential acute health effects

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

**Inhalation** : Harmful if inhaled. May cause respiratory irritation.

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

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

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

**Eye contact**: Adverse symptoms may include the following:

pain or irritation

watering redness

**Inhalation** : Adverse symptoms may include the following:

respiratory tract irritation

coughing

**Skin contact**: Adverse symptoms may include the following:

irritation redness

**Ingestion**: No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### **Short term exposure**

Potential immediate

: Not available.

Potential delayed effects

: Not available.

Long term exposure

Potential immediate

effects

effects

: Not available.

Potential delayed effects : Not available.

### Potential chronic health effects

Not available.

General: May cause damage to organs through prolonged or repeated exposure. 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.Reproductive toxicity : No known significant effects or critical hazards.

# Section 12. Ecological information

### **Toxicity**

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# **Section 12. Ecological information**

Product/ingredient name	Result	Species	Exposure
<b>x</b> ylene	Acute EC50 90 mg/l Fresh water	Crustaceans - Cypris	48 hours
		subglobosa	
	Acute LC50 8.5 ppm Marine water	Crustaceans - Palaemonetes	48 hours
		pugio - Adult	
	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes	48 hours
		pugio	
	Acute LC50 16940 μg/l Fresh water	Fish - Carassius auratus	96 hours
	Acute LC50 15700 μg/l Fresh water	Fish - Lepomis macrochirus -	96 hours
		Juvenile (Fledgling, Hatchling,	
		Weanling)	
	Acute LC50 20870 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 19000 μg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
ethylbenzene	Acute EC50 4600 μg/l Fresh water	Algae - Pseudokirchneriella	72 hours
		subcapitata	
	Acute EC50 5400 μg/l Fresh water	Algae - Pseudokirchneriella	72 hours
		subcapitata	
	Acute EC50 3600 μg/l Fresh water	Algae - Pseudokirchneriella	96 hours
		subcapitata	
	Acute EC50 4900 μg/l Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 7700 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 6.53 mg/l Marine water	Crustaceans - Artemia sp	48 hours
		Nauplii	
	Acute EC50 13.3 mg/l Marine water	Crustaceans - Artemia sp	48 hours
		Nauplii	
	Acute EC50 2.97 mg/l Fresh water	Daphnia - Daphnia magna -	48 hours
		Neonate	
	Acute EC50 2.93 mg/l Fresh water	Daphnia - Daphnia magna -	48 hours
		Neonate	
	Acute LC50 8.78 mg/l Marine water	Crustaceans - Artemia sp	48 hours
		Nauplii	
	Acute LC50 13.3 mg/l Marine water	Crustaceans - Artemia sp	48 hours
		Nauplii	
	Acute LC50 40000 µg/l Marine water	Crustaceans - Cancer magister -	48 hours
		Zoea	
	Acute LC50 18.4 mg/l Fresh water	Daphnia - Daphnia magna -	48 hours
		Neonate	
	Acute LC50 13.9 mg/l Fresh water	Daphnia - Daphnia magna -	48 hours
		Neonate	
	Acute LC50 75000 μg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5100 µg/l Marine water	Fish - Menidia menidia	96 hours
	Acute LC50 4.3 ul/L Marine water	Fish - Morone saxatilis -	96 hours
		Juvenile (Fledgling, Hatchling,	
		Weanling)	
	Acute LC50 4200 μg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 9090 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 9100 µg/l Fresh water	Fish - Pimephales promelas	96 hours

### Persistence and degradability

Not available.

### **Bioaccumulative potential**

# **Section 12. Ecological information**

Product/ingredient name	LogPow	BCF	Potential
Fexamethylene diisocyanate, oligomers	5.54	367.7	low
2-methoxy-1-methylethyl acetate	1.2	-	low
xylene ethylbenzene	3.12 3.6	8.1 to 25.9	low low

**Mobility in soil** 

Soil/water partition coefficient (K<sub>oc</sub>)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

### Section 13. Disposal considerations

### Disposal methods

: The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers

# **Section 14. Transport information**

The information provided in section 14 is based on a bulk package shipment via ground transport in North America. All shippers are responsible for ensuring the proper transportation classification and package/container requirements are followed for the relevant mode of transport.

	TDG Classification	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	III
Environmental hazards	No.	No.	No.

#### **Additional information**

**TDG Classification** 

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).

IMDG : <u>Emergency schedules</u> F-E, \_S-E\_

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# **Section 14. Transport information**

Viscous liquid exception This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.

**IMDG Code Segregation group** Not applicable

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.

Transport in bulk according : Not available.

to IMO instruments

### Section 15. Regulatory information

**Canadian lists** 

**Canadian NPRI** : The following components are listed: propylene glycol methyl ether acetate; xylene

(all isomers); ethylbenzene

**CEPA Toxic substances** 

**Inventory list** 

: None of the components are listed.

Canada : All components are listed or exempted. **United States** : All components are active or exempted.

### Section 16. Other information

**History** 

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revision

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: 3 Version **Unique ID** 

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HPR = Hazardous Products Regulations IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not availableSGG = Segregation Group UN = United Nations

### Procedure used to derive the classification

Classification	Justification
AMMABLE LIQUIDS - Category 3	On basis of test data
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract	Calculation method
irritation) - Category 3	
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method

Indicates information that has changed from previously issued version.

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### Section 16. Other information

### **Notice to reader**

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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