# SAFETY DATA SHEET



The information in this Safety Data Sheet is required pursuant to GHS UN rev. 7

Date of issue/Date of revision 20 January 2025

**Version 3** 

## Section 1. Identification

**Product code** : 000001085137

Product name : SIGMAFAST 278 HARDENER

Product type : Liquid.

Other means of identification

00323232; 00345239; 00351714; 00453392

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

Product use : Hardener.

Professional applications, Used by spraying.

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

**Supplier's information**: PPG Asian Paints Private Limited

6A Shanti Nagar Santa Cruz (East) Mumbai - 400055

India

**Emergency telephone** 

number:

: +91 22 6815 8700

## Section 2. Hazards identification

Classification of the substance or mixture : ► AMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 5
ACUTE TOXICITY (dermal) - Category 5
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

SKIN SENSITISATION - Category 1

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract

irritation) - Category 3

SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity:

44.4%

Percentage of the mixture consisting of ingredient(s) of unknown acute dermal

toxicity: 47.7%

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation

toxicity: 54.6%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the

aquatic environment: 49.9%

**GHS label elements** 

**Hazard pictograms** 









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**Product name SIGMAFAST 278 HARDENER** 

## Section 2. Hazards identification

Signal word

: Danger

**Hazard statements** 

: Mammable liquid and vapour.

May be harmful if swallowed or in contact with skin.

Causes skin irritation.

May cause an allergic skin reaction. Causes serious eye damage.

Harmful if inhaled.

May cause respiratory irritation.

Toxic to aquatic life with long lasting effects.

#### **Precautionary statements**

**Prevention** 

Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapour. Wash hands thoroughly after handling. Do not touch eyes. Contaminated work clothing should not be allowed out of the workplace.

Response

Collect spillage. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help. IF SWALLOWED: Get medical help. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water. IF ON SKIN: Get medical help. Wash with plenty of water. If skin irritation or rash occurs: Get medical help. If skin irritation occurs: Get medical help. Take off contaminated clothing and wash it before reuse. IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help. Get medical help if you feel unwell.

Storage Disposal

- : Store locked up. Store in a well-ventilated place. Keep container tightly closed.
- : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification

Other hazards which do not : Prolonged or repeated contact may dry skin and cause irritation.

# Section 3. Composition/information on ingredients

Substance/mixture : Mixture

### **CAS number/other identifiers**

**CAS number** : Not applicable.

Ingredient name	%	CAS number
<b>x</b> ýlene	25 - <50	1330-20-7
proprietary aralkylpolyamine	10 - <20	SUB119920
1-methoxy-2-propanol	5 - <10	107-98-2
benzyl alcohol	5 - <10	100-51-6
ethylbenzene	3 - <5	100-41-4
2,4,6-tris(dimethylaminomethyl)phenol	3 - <5	90-72-2
Formaldehyde, polymer with N,N-dimethyl-1,3-propanediamine and phenol	3 - <5	445498-00-0
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	3 - <5	68082-29-1

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 and hence require reporting in this section.

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

SUB codes represent substances without registered CAS Numbers.

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**Product name SIGMAFAST 278 HARDENER** 

### Section 4. First aid measures

## **Description of necessary first aid measures**

**Eye contact**: Check for and remove any contact lenses. Immediately flush eyes with running

water for at least 15 minutes, keeping eyelids open. Seek immediate medical

attention.

**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.

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

### Potential acute health effects

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

Inhalation : Marmful if inhaled. May cause respiratory irritation.

**Skin contact**: May be harmful in contact with skin. Causes skin irritation. Defatting to the skin.

May cause an allergic skin reaction.

**Ingestion**: May be harmful if swallowed.

### Over-exposure signs/symptoms

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

pain watering redness

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

respiratory tract irritation

coughing

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

pain or irritation

redness dryness cracking

blistering may occur

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

stomach pains

### 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

: 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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**Product name SIGMAFAST 278 HARDENER** 

# Section 5. Firefighting measures

### **Extinguishing media**

Suitable extinguishing

media

Unsuitable extinguishing

media

: Use dry chemical, CO2, water spray (fog) or foam.

: Do not use water jet.

Specific hazards arising from the chemical

: 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. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

: Decomposition products may include the following materials: carbon oxides

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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe 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".

**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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

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

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**Product name SIGMAFAST 278 HARDENER** 

# 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. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. 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.

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 oxidising 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.

# Section 8. Exposure controls/personal protection

#### **Control parameters**

Occupational exposure limits

Ingredient name	Exposure limits
xylene	ACGIH TLV (United States, 7/2023) [p-xylene and mixtures containing p-xylene] Ototoxicant. TWA 8 hours: 20 ppm.
1-methoxy-2-propanol	ACGIH TLV (United States, 7/2023)  TWA 8 hours: 50 ppm.  TWA 8 hours: 184 mg/m³.  STEL 15 minutes: 100 ppm.  STEL 15 minutes: 369 mg/m³.
ethylbenzene	ACGIH TLV (United States, 7/2023) Ototoxicant. TWA 8 hours: 20 ppm.

procedures

**Recommended monitoring**: Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

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**Product name SIGMAFAST 278 HARDENER** 

# 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.

**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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

**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.

**Gloves** 

: 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.

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

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

**Appearance** 

Physical state : Liquid.
Colour : Colourless.

Odour : Aromatic. [Slight]
Odour threshold : Not available.

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**Product name SIGMAFAST 278 HARDENER** 

# Section 9. Physical and chemical properties

Melting point/freezing point **Boiling point or initial** 

boiling point and boiling

: Not available. : >37.78°C (>100°F)

range

**Flammability** Lower and upper explosive

: Not available. : Not available.

(flammable) limits

: Closed cup: 29°C (84.2°F) Flash point

**Auto-ignition temperature** 

Ingredient name	°C	<b>F</b>	Method
1-methoxy-2-propanol	270	518	

**Decomposition temperature** 

pН

: Not available.

: Not applicable.

**Viscosity** 

: Dynamic (room temperature): Not available. Kinematic (room temperature): >400 mm<sup>2</sup>/s

Kinematic (40°C): >21 mm<sup>2</sup>/s

**Viscosity** 

60 - 100 s (ISO 6mm)

Solubility(ies)

Media Result cold water Not soluble

Partition coefficient: n-

octanol/water

: Not applicable.

Vapour pressure

	Vapour Pressure at 20°C			Vapou	ır pressu	re at 50°C
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
ethylbenzene	9.30076	1.2				

**Relative density** : 0.97

Relative vapour density

**Particle characteristics** 

: Not available.

Median particle size

: Not applicable. **Evaporation rate** : Not available.

# Section 10. Stability and reactivity

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

**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** : When exposed to high temperatures may produce hazardous decomposition

products.

: Keep away from the following materials to prevent strong exothermic reactions: **Incompatible materials** 

oxidising agents, strong alkalis, strong acids.

**Hazardous decomposition** 

products

: Depending on conditions, decomposition products may include the following

materials: carbon oxides nitrogen oxides

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**Product name SIGMAFAST 278 HARDENER** 

# Section 10. Stability and reactivity

Hazardous polymerisation : Under normal conditions of storage and use, hazardous polymerisation will not

# Section 11. Toxicological information

### Information on toxicological effects

### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
<b>x</b> ylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
1-methoxy-2-propanol	LC50 Inhalation Vapour	Rat	>7000 ppm	6 hours
	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	5.2 g/kg	-
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
_	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
2,4,6-tris	LD50 Dermal	Rat	1280 mg/kg	-
(dimethylaminomethyl)				
phenol				
	LD50 Oral	Rat	1200 mg/kg	-
Fatty acids, C18-unsatd.,	LD50 Dermal	Rat	>2000 mg/kg	-
dimers, oligomeric reaction				
products with tall-oil fatty				
acids and				
triethylenetetramine				
	LD50 Oral	Rat	>2000 mg/kg	-

# Conclusion/Summary

: There are no data available on the mixture itself.

### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Irritant	Human	-	-	-

### **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**

Product/ingredient name	Route of exposure	Species	Result
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	skin	Mouse	Sensitising

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**Product name SIGMAFAST 278 HARDENER** 

# **Section 11. Toxicological information**

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** 

**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)

Name	Category	Route of exposure	Target organs
xylene	Category 3		Respiratory tract irritation
1-methoxy-2-propanol	Category 3	-	Narcotic effects

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

Name	,	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs

### **Aspiration hazard**

Name	Result
benzyl alcohol	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 2 ASPIRATION HAZARD - Category 1

Information on likely routes

of exposure

: Not available.

Potential acute health effects

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

Inhalation : Farmful if inhaled. May cause respiratory irritation.

**Skin contact**: May be harmful in contact with skin. Causes skin irritation. Defatting to the skin.

May cause an allergic skin reaction.

**Ingestion** : May be harmful if swallowed.

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

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

pain watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

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**Product name SIGMAFAST 278 HARDENER** 

# **Section 11. Toxicological information**

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

pain or irritation

redness dryness cracking

blistering may occur

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

stomach pains

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

**Short term exposure** 

Potential immediate : Not available.

effects

Potential delayed effects: Not available.

**Long term exposure** 

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General: 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 : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Reproductive toxicity : No known significant effects or critical hazards.

#### **Numerical measures of toxicity**

### **Acute toxicity estimates**

Route	ATE value
<b>Ø</b> ral	2451.8 mg/kg
Dermal	2456.56 mg/kg
Inhalation (vapours)	17.76 mg/l
Inhalation (dusts and mists)	2.28 mg/l

#### Other information

Prolonged or repeated contact may dry skin and cause irritation. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/ aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Exposure to amine vapor has been reported to cause transient corneal edema described as blue haze, halo effect, foggy or blurred vision for several hours. This condition is typically temporary and does not cause permanent visual effects. When the proper eye protection specified in Section 8 is worn, exposure is significantly reduced and the condition has not been observed.

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**Product name SIGMAFAST 278 HARDENER** 

# **Section 12. Ecological information**

### **Toxicity**

Product/ingredient name	Result	Species	Exposure
1-methoxy-2-propanol	Acute LC50 23300 mg/l	Daphnia	48 hours
	Acute LC50 >4500 mg/l Fresh water	Fish	96 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	-
2,4,6-tris	Acute LC50 >100 mg/l	Daphnia	48 hours
(dimethylaminomethyl)phenol	_		
	Acute LC50 >100 mg/l	Fish	96 hours
Fatty acids, C18-unsatd.,	EC10 1.78 mg/l	Algae	72 hours
dimers, oligomeric reaction			
products with tall-oil fatty			
acids and			
triethylenetetramine			

## Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene	-	79 % - Readily - 10 days	-	-
2,4,6-tris	OECD 301D	4 % - Not readily - 28 days	-	-
(dimethylaminomethyl)phenol	Ready			
	Biodegradability -			
	Closed Bottle			
	Test			

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
benzyl alcohol	-	-	Readily
ethylbenzene	-	-	Readily
2,4,6-tris	-	-	Not readily
(dimethylaminomethyl)phenol Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	-	-	Not readily

### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
<b>x</b> ylene	3.12	7.4 to 18.5	Low
1-methoxy-2-propanol	<1	-	Low
benzyl alcohol	0.87	-	Low
ethylbenzene	3.6	79.43	Low
2,4,6-tris	0.219	-	Low
(dimethylaminomethyl)pheno			

### **Mobility in soil**

Soil/water partition coefficient (Koc)

: Not available.

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

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**Product name SIGMAFAST 278 HARDENER** 

# Section 13. Disposal considerations

**Disposal methods** 

: 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. 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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

# **Section 14. Transport information**

	UN	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
Transport hazard class(es)	3	3	3
Packing group	III	III	III
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Marine pollutant substances	Not applicable.	(Formaldehyde, polymer with N,N-dimethyl- 1,3-propanediamine and phenol)	Not applicable.

#### **Additional information**

UN

: This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 according to 2.3.2.5.2.

**IMDG** 

: This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2

and 4.1.1.4 to 4.1.1.8 according to 2.3.2.5.

**IATA** 

: The environmentally hazardous substance mark may appear if required by other transportation regulations.

**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 applicable.

to IMO instruments

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**Product name SIGMAFAST 278 HARDENER** 

# Section 15. Regulatory information

#### International regulations

**Montreal Protocol** 

Not listed.

**Stockholm Convention on Persistent Organic Pollutants** 

Not listed.

## Section 16. Other information

**History** 

Date of issue/Date of

: 20 January 2025

revision

Date of previous issue : 9/6/2024

Version : 3
Prepared by : EHS

**yey to abbreviations** : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

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)

UN = United Nations

#### Procedure used to derive the classification

Classification	Justification
AMMABLE LIQUIDS - Category 3	On basis of test data
ACUTE TOXICITY (oral) - Category 5	Calculation method
ACUTE TOXICITY (dermal) - Category 5	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract	Calculation method
irritation) - Category 3	
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2	Calculation method
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2	Calculation method

### ✓ Indicates information that has changed from previously issued version.

#### **Notice to reader**

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