# SAFETY DATA SHEET



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

Date of issue/Date of revision 31 October 2023 Version 12.02

### Section 1. Identification

Product code	: 00239932
Product name	: SIGMADUR 188/520/550 HARDENER
Product type	: Liquid.
Other means of identification Not available.	
Relevant identified uses of th	e substance or mixture and uses advised against
Product use	Coating. 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	: FLAMMABLE LIQUIDS - Category 3
substance or mixture	ACUTE TOXICITY (inhalation) - Category 4
	SKIN CORROSION/IRRITATION - Category 3
	RESPIRATORY SENSITISATION - Category 1
	SKIN SENSITISATION - Category 1
	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3

GHS label elements	
Hazard pictograms	
Signal word	: Danger
Hazard statements	<ul> <li>Flammable liquid and vapour. Causes mild skin irritation. May cause an allergic skin reaction. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Harmful to aquatic life.</li> </ul>

#### **Precautionary statements**

### Section 2. Hazards identification

Prevention	:	Wear protective gloves, protective clothing and eye or face protection. Wear respiratory 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. Contaminated work clothing should not be allowed out of the workplace.
Response	:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention.
Storage	1	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Disposal	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Other hazards which do not		Prolonged or repeated contact may dry skin and cause irritation.

result in classification

Section 3. Composition/information on ingredients

Substance/mixture

**CAS** number/other identifiers

: Mixture

<b>CAS number</b> : Not applicable.		
Ingredient name	%	CAS number
Hexamethylene diisocyanate, oligomers (Biuret type) 2-methoxy-1-methylethyl acetate xylene ethylbenzene hexamethylene-di-isocyanate	50 - 100 10 - <20 5 - <10 5 - <10 0.3 - <1	28182-81-2 108-65-6 1330-20-7 100-41-4 822-06-0

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.

### Section 4. First aid measures

#### Description of necessary first aid measures

Eye contact	<ul> <li>Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.</li> </ul>
Inhalation	<ul> <li>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.</li> </ul>
Skin contact	<ul> <li>Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.</li> </ul>
Ingestion	<ul> <li>If swallowed, seek medical advice immediately and show the container or label.</li> <li>Keep person warm and at rest. Do NOT induce vomiting.</li> </ul>
Most important sympt	oms/effects, acute and delayed

#### Potential acute health effects

Eye contact	: No known significant effects or critical hazards.
Inhalation	: Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### Section 4. First aid measures

Skin contact	<ul> <li>Causes mild skin irritation. Defatting to the skin. May cause an allergic skin reaction.</li> </ul>
Ingestion	: No known significant effects or critical hazards.
Over-exposure signs/symp	<u>otoms</u>
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing wheezing and breathing difficulties asthma
Skin contact	: Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	: No specific data.
Indication of immediate me	dical 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)

## Section 5. Firefighting 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 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 harmful to aquatic life. 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 Cyanate and isocyanate. hydrogen cyanide
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.

### Section 5. Firefighting measures

**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

regulations.

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	
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.
Methods and material for co	ntainment 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 spill product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Special provisions	: Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes,

rivers, or sewers, inform the appropriate authorities in accordance with local

Product code 00239932 Product name SIGMADUR 188/520/550 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 sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. 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 $35^{\circ}C$ ( $32$ to $95^{\circ}F$ ). 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. Precautions should be taken to minimise exposure to atmospheric humidity or water. $CO_2$ will be formed, which, in closed containers, could result in pressurisation.

### Section 8. Exposure controls/personal protection

#### **Control parameters**

#### **Occupational exposure limits**

Ingredient name	Exposure limits
xylene	ACGIH TLV (United States, 1/2022). [p- xylene and mixtures containing p-xylene] Ototoxicant.
	TWA: 20 ppm 8 hours.
ethylbenzene	ACGIH TLV (United States, 1/2022).
,	Ototoxicant.
	TWA: 20 ppm 8 hours.
hexamethylene-di-isocyanate	ACGIH TLV (United States, 1/2022).
, ,	TWA: 0.03 mg/m <sup>3</sup> 8 hours.
	TWA: 0.005 ppm 8 hours.

### 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.

### 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 measu	<u>ires</u>
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.
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	<ul> <li>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.</li> </ul>
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.
Restrictions on use	<ul> <li>Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.</li> </ul>

### 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	: Not available.
Odour	: Not available.
	Not available.

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### **Section 9. Physical and chemical properties**

Relative density       :       1.07         Relative vapour density       :       Not available.         Particle characteristics       Median particle size       :       Not available.         Evaporation rate       :       Not available.       Section 10. Stability and reactivity         Reactivity       :       No specific test data related to reactivity available for this product or its ing         Chemical stability       :       The product is stable.         Possibility of hazardous reactions       :       Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       :       In a fire, hazardous decomposition products may be produced.									
Boiling point, initial boiling       : >37.78°C (>100°F)         point, and boiling range       : Not available.         Flammability       : Not available.         Cower and upper explosive       : Not available.         (flammable) limits       : Closed cup: 40.8°C (105.4°F)         Auto-ignition temperature       : Not available.         Decomposition temperature       : Not available.         pH       : Not applicable.         Viscosity       : Kinematic (room temperature): >400 mm²/s         Kinematic (no°C): >21 mm²/s         Solubility(ies)       :         Vapour pressure       :         Ingredient name       Mestud         mm Hg kPa       Method         Hg       ingredient name         ethylbenzene       9.3       1.2         Particle characteristics       Median particle size         Median particle	Odour threshold	:							
point, and boiling range       Flammability       :       Not available.         Flammability       :       Not available.       .         (fammabile) limits       :       :       Not available.         Flash point       :       :       Closed cup: 40.8°C (105.4°F)         Auto-ignition temperature       :       280°C (536°F)         Decomposition temperature       :       Not available.         pH       :       Not available.         pH       :       Not available.         Viscosity       :       Kinematic (room temperature): >400 mm²/s         Solubility(ies)       :       :       Media         Partition coefficient: n-       :       Not applicable.         octanol/water       :       Not applicable.         Vapour pressure       :       Ingredient name       mm Hg       KPa       Method       mm         vapour pressure       :       1.07       Relative density       :       1.07         Relative vapour density       :       Not available.       .       Section 10. Stability and reactivity         Relative in particle size       :       Not available.       .       Section 10. Stability and reactivity         Reactivity       :	Melting point/freezing point	:	Not available.						
Lower and upper explosive (flammable) limits       : Not available.         Flash point       : Closed cup: 40.8°C (105.4°F)         Auto-ignition temperature       : 280°C (536°F)         Decomposition temperature       : Not available.         pH       : Not applicable.         Viscosity       : Kinematic (room temperature): >400 mm²/s Kinematic (40°C): >21 mm²/s         Solubility(ies)       ::         Partition coefficient: n- octanol/water       : Not applicable.         Vapour pressure       :         Ingredient name       mm Hg         etnylbenzene       9.3         Particle characteristics         Media name       mm Hg         Particle characteristics         Media namical stability       : Not available.         Particle characteristics         Media particle size       : Not available.         Particle characteristics         Media particle size       : Not available.         Section 10. Stability and reactivity         Reactivity       : No specific test data related to reactivity available for this product or its ing         Chemical stability       : The product is stable.         Possibility of hazardous       : Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid		:	>37.78°C (>100°F)						
(flammable) limits       Flash point       :       Closed cup: 40.8°C (105.4°F)         Auto-ignition temperature       :       280°C (536°F)         Decomposition temperature       :       Not available.         PH       :       Not available.         Viscosity       :       Kinematic (room temperature): >400 mm²/s         Solubility(ies)       :       Media       Result         Cold water       Not soluble         Partition coefficient: n- octanol/water       :       Not applicable.         Vapour pressure       :       Ingredient name       mm Hg       RPa       Method       mm       kPa       M         Vapour pressure       :       1.07       Ingredient name       mm Hg       RPa       Method       Mg	Flammability	:	Not available.	lot available.					
Auto-ignition temperature       : 280°C (536°F)         Decomposition temperature       : Not available.         pH       : Not applicable.         Viscosity       : Kinematic (room temperature): >400 mm²/s Kinematic (40°C): >21 mm²/s         Solubility(ies)       : Media         Partition coefficient: n- octanol/water       : Not applicable.         Vapour pressure       : Not applicable.         Vapour pressure       : Not applicable.         Relative density       : 1.07         Relative vapour density       : Not available.         Particle characteristics       Media network         Media particle size       : Not available.         Particle characteristics       Mot available.         Section 10. Stability and reactivity         Reactivity       : No specific test data related to reactivity available for this product or its ing         Chemical stability       : The product is stable.         Possibility of hazardous reactions       : Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       : In a fire, hazardous decomposition products may be produced.		:	Not available.	Not available.					
Decomposition temperature       : Not available.         pH       : Not applicable.         Viscosity       : Kinematic (room temperature): >400 mm²/s Kinematic (40°C); >21 mm²/s         Solubility(ies)       :         Partition coefficient: n- octanol/water       : Not applicable.         Vapour pressure       :         Ingredient name       Vapour Pressure at 20°C       Vapour pressure         result       :         vapour pressure       :       :         Relative density       :       1.2         Particle characteristics       :       Not available.         Particle characteristics       :       Not available.         Section 10. Stability and reactivity       :       Not available.         Section 10. Stability and reactivity       :       Not specific test data related to reactivity available for this product or its ing         Chemical stability       :       :       The product is stable.         Possibility of hazardous reactions       :       :       Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       :       :       In a fire, hazardous decomposition products may be produced.	Flash point	1	Closed cup: 40.8°C (105.4°F)						
pH       : Not applicable.         Viscosity       : Kinematic (room temperature): >400 mm²/s Kinematic (40°C): >21 mm²/s         Solubility(ies)       :         Partition coefficient: n- octanol/water       :         Vapour pressure       :         Ingredient name       Vapour Pressure at 20°C       Vapour pressure         Ingredient name       9.3       1.2       Imm         Relative density       :       1.07         Relative vapour density       :       Not available.         Particle characteristics       :       Not available.         Median particle size       :       Not available.         Evaporation rate       :       Not available.         Section 10. Stability and reactivity       :       No specific test data related to reactivity available for this product or its ing         Chemical stability       :       :       Inder normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       :       In a fire, hazardous decomposition products may be produced.	Auto-ignition temperature	:	280°C (536°F)						
Viscosity       :       Kinematic (room temperature): >400 mm²/s Kinematic (40°C): >21 mm²/s         Solubility(ies)       :       Media       Result         cold water       Not soluble         Partition coefficient: n- octanol/water       :       Not applicable.         Vapour pressure       :       Ingredient name       mm Hg kPa       Method       mm       kPa       M         ethylbenzene       9.3       1.2       Image: Solubility in the soluble.       Solubility in the soluble.       Solubility is in the solution of the solutis isolution of the solutis isolution of the sol	Decomposition temperature	1	Not available.						
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Solubility(ies)       :       cold water       Not soluble         Partition coefficient: n- octanol/water       :       Not applicable.         Vapour pressure       :       Ingredient name       Wapour Pressure at 20°C       Vapour pressure         Ingredient name       mm Hg       kPa       Method       mm       kPa       M         ethylbenzene       9.3       1.2       Impressure	Viscosity	:			): >400 r	mm²/s			
Cold water       Not soluble         Partition coefficient: n- octanol/water       : Not applicable.         Vapour pressure       : Ingredient name       Vapour Pressure at 20°C       Vapour pressure         Ingredient name       Ingredient name       Imm Hg       KPa       Method       Imm         Relative density       : 1.07       Ingredient explicit       Ingredient       Ingredient       Ingredient         Relative vapour density       : Not available.       Particle characteristics       Ingredient       Ingredient       Ingredient         Median particle size       : Not available.       Particle characteristics       Ingredient       Ingredient       Ingredient       Ingredient         Section 10. Stability and reactivity       : Not available.       Ingredient       Ingre	Solubility/ico)		Media	Re	sult				
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Ingredient name       Improvement       Improvement </th <th></th> <th>:</th> <th>Not applicable.</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>		:	Not applicable.						
Relative density       : 1.07         Relative vapour density       : Not available.         Particle characteristics         Median particle size       : Not available.         Evaporation rate       : Not available.         Section 10. Stability and reactivity         Reactivity       : No specific test data related to reactivity available for this product or its ing         Chemical stability       : The product is stable.         Possibility of hazardous reactions       : Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       : In a fire, hazardous decomposition products may be produced.	Vapour pressure	:		Vapoι	ır Press	sure at 20°C	Vap	our pres	sure at 50°C
Relative density       : 1.07         Relative vapour density       : Not available.         Particle characteristics       Median particle size         Median particle size       : Not applicable.         Evaporation rate       : Not available.         Section 10. Stability and reactivity         Reactivity       : No specific test data related to reactivity available for this product or its ing         Chemical stability       : The product is stable.         Possibility of hazardous reactions       : Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       : In a fire, hazardous decomposition products may be produced.			Ingredient name	mm Hg	kPa	Method		kPa	Method
Relative vapour density       : Not available.         Particle characteristics       .         Median particle size       : Not applicable.         Evaporation rate       : Not available.         Section 10. Stability and reactivity         Reactivity       : No specific test data related to reactivity available for this product or its ing         Chemical stability       : The product is stable.         Possibility of hazardous reactions       : Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       : In a fire, hazardous decomposition products may be produced.			ethylbenzene	9.3	1.2				
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Evaporation rate       : Not available.         Section 10. Stability and reactivity         Reactivity       : No specific test data related to reactivity available for this product or its ing         Chemical stability       : The product is stable.         Possibility of hazardous reactions       : Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       : In a fire, hazardous decomposition products may be produced.	Particle characteristics								
Section 10. Stability and reactivity         Reactivity       : No specific test data related to reactivity available for this product or its ing         Chemical stability       : The product is stable.         Possibility of hazardous reactions       : Under normal conditions of storage and use, hazardous reactions will not         Conditions to avoid       : In a fire, hazardous decomposition products may be produced.	Median particle size	:	Not applicable.						
Reactivity       : No specific test data related to reactivity available for this product or its ing         Chemical stability       : The product is stable.         Possibility of hazardous       : Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       : In a fire, hazardous decomposition products may be produced.	Evaporation rate	1	Not available.						
Chemical stability       : The product is stable.         Possibility of hazardous reactions       : Under normal conditions of storage and use, hazardous reactions will not reactions         Conditions to avoid       : In a fire, hazardous decomposition products may be produced.	Section 10. Stabili	ty	and reactivi	ty					
Possibility of hazardous: Under normal conditions of storage and use, hazardous reactions will not reactionsConditions to avoid: In a fire, hazardous decomposition products may be produced.	Reactivity	:	No specific test data	related to	o reactiv	ity available fo	or this pro	oduct or it	ts ingredients.
reactions         Conditions to avoid       : In a fire, hazardous decomposition products may be produced.	Chemical stability	:	The product is stable.						
	-	:	Under normal condit	ions of st	orage ar	nd use, hazard	lous read	ctions will	l not occur.
	Conditions to avoid	:	In a fire, hazardous	decompo	sition pro	oducts may be	e produce	ed.	
Incompatible materials	Incompatible materials	ι.	Keen away from: ovi	idisina 20	onte etr	ona alkalie etr	rona acio	ls amino	s alcohols

- Incompatible materials : Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.
- Hazardous decomposition
   : Depending on conditions, decomposition products may include the following materials: Cyanate and isocyanate. carbon oxides nitrogen oxides hydrogen cyanide

   Hazardous decomposition
   : Depending on conditions, decomposition products may include the following materials: Cyanate and isocyanate. carbon oxides nitrogen oxides hydrogen cyanide
- Hazardous polymerisation : Under normal conditions of storage and use, hazardous polymerisation will not occur.

### Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
rexamethylene diisocyanate, oligomers (Biuret type)	LD50 Dermal	Rat	>15800 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
2-methoxy-1-methylethyl acetate	LC50 Inhalation Vapour	Rat	30 mg/l	4 hours
	LD50 Dermal LD50 Oral	Rabbit Rat	>5 g/kg 6190 mg/kg	-
xylene	LD50 Dermal LD50 Oral	Rabbit Rat	1.7 g/kg 4.3 g/kg	-
ethylbenzene	LC50 Inhalation Vapour LD50 Dermal	Rat Rabbit	17.8 mg/l 17.8 g/kg	4 hours -
hexamethylene-di- isocyanate	LD50 Oral LC50 Inhalation Dusts and mists	Rat Rat	3.5 g/kg 124 mg/m³	- 4 hours
	LC50 Inhalation Vapour LD50 Dermal	Rat Rabbit	151 mg/m³ 0.57 g/kg	4 hours -
	LD50 Oral	Rat	0.71 g/kg	-

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

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
₩ýlene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Conclusion/Summary	·	·		·	
Skin	: There are no data avai	lable on the mi	xture itself.		
Eyes	: There are no data avai	lable on the mi	xture itself.		
Respiratory <u>Sensitisation</u>	: There are no data avai	lable on the mi	xture itself.		
Conclusion/Summary					
Skin	: There are no data avai	lable on the mi	xture itself.		
Respiratory	: There are no data avai	lable on the mi	xture itself.		
<u>Mutagenicity</u>					
Conclusion/Summary	: There are no data avai	lable on the mi	xture itself.		
<u>Carcinogenicity</u> Conclusion/Summary	: There are no data avai	lable on the mi	xture itself.		
<u>Reproductive toxicity</u> Conclusion/Summary	: There are no data avai	lable on the mi	xture itself.		
<u>Teratogenicity</u> Conclusion/Summary	: There are no data avai	able on the mi	xture itself.		
Specific target organ toxici	<u>ty (single exposure)</u>				

### Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Hexamethylene diisocyanate, oligomers (Biuret type)	Category 3	-	Respiratory tract irritation
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
xylene	Category 3	-	Respiratory tract irritation
hexamethylene-di-isocyanate	Category 3	-	Respiratory tract irritation

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

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

#### Aspiration hazard

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

Information on likely routes of exposure	:	Not available.
Potential acute health effect	s	
Eye contact		No known significant effects or critical hazards.
Inhalation	:	Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact	:	Causes mild skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	:	No known significant effects or critical hazards.
Symptoms related to the ph	ysio	cal, 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 wheezing and breathing difficulties asthma
Skin contact	:	Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	:	No specific data.
Delayed and immediate effe	<u>cts</u>	as well as chronic effects from short and long-term exposure
Short term exposure		
Potential immediate effects	:	Not available.

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### Section 11. Toxicological information

		5
Potential delayed effects	:	Not available.
Long term exposure		
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.
Potential chronic health eff	ect	<u>s</u>
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
Øral	31013 mg/kg
Dermal	27208.66 mg/kg
Inhalation (vapours)	13.01 mg/l
Inhalation (dusts and mists)	1.73 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. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Repeated exposure may lead to permanent respiratory disability. Moisture-sensitive material. Avoid contact with skin and clothing.

### Section 12. Ecological information

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
Rexamethylene diisocyanate, oligomers (Biuret type)	Acute EC50 >1000 mg/l	Algae - scenedesmus subspicatus	72 hours
с ( ), , ,	Acute EC50 >100 mg/l Acute LC50 >100 mg/l	Daphnia - <i>daphnia magna</i> Fish - <i>Danio rerio (zebra fish)</i>	48 hours 96 hours
2-methoxy-1-methylethyl acetate	Acute LC50 134 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh water Chronic NOEC 1 mg/l Fresh water	Daphnia Daphnia - Ceriodaphnia dubia	48 hours -

#### Persistence and degradability

### Section 12. Ecological information

Product/ingredient name	Test	Result		Dose		Inoculum
2-methoxy-1-methylethyl acetate ethylbenzene	-		dily - 28 days dily - 10 days	-		-
Product/ingredient name	Aquatic half-life	·	Photolysis		Biodeg	radability
Fexamethylene diisocyanate, oligomers (Biuret type) 2-methoxy-1-methylethyl acetate xylene ethylbenzene	-		-		Not rea Readily Readily Readily	, ,

#### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
Hexamethylene diisocyanate, oligomers (Biuret type)	5.54	3.2	Low
2-methoxy-1-methylethyl acetate	1.2	-	Low
xylene	3.12	7.4 to 18.5	Low
ethylbenzene	3.6	79.43	Low
hexamethylene-di-isocyanate	0.02	-	Low

#### Mobility in soil

Soil/water partition	:
coefficient (Koc)	

: 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 minimised wherever possible. 2 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	ΙΑΤΑ
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.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

#### **Additional information**

UN : This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.1.

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

IATA : None identified.

Transport in bulk according : Not applicable. to IMO instruments

### 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 revision	: 31 October 2023
Date of previous issue	: 1/27/2023
Version	: 12.02
Prepared by	: EHS

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.

### Section 16. Other information

key to abbreviations	: ATE = Acute Toxicity Estimate
key to appreviations	•
	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
	on – onited nations

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN CORROSION/IRRITATION - Category 3	Calculation method
RESPIRATORY SENSITISATION - Category 1	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3	Calculation method
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3	Calculation method

**V** Indicates information that has changed from previously issued version.

#### Notice to reader

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