# SAFETY DATA SHEET

Safety Data Sheet according to GB/T 16483-2008 and GB/T 17519-2013



Date of issue/Date of revision 12 October 2019

V	ers	ion	2.01	

Product code	: 00359043
Product name	: SIGMADUR GLOSS/520/550 HARDENER
Product name	: SIGMADUR GLOSS/520/550 HARDENER
Product type	: Liquid.
Relevant identified uses of th	e substance or mixture and uses advised against
Product use	: Professional applications, Used by spraying.
Use of the substance/ mixture	: Coating.
Uses advised against	: Not applicable.
Supplier's details	: PPG Coatings (Kunshan) Co., Ltd 53 Jinyang Road, Lujia Town, 215331 Kunshan City, Jiangsu Province, P.R. China Tel: 86 512 57678859 Fax: 86 512 57678857
Emergency telephone number (with hours of operation)	: 00 86 532 83889090

## Section 2. Hazards identification

Classification of the substance or mixture according to GB 13690-2009 and GB 30000-2013

**Emergency overview** Liauid. Colorless. Aromatic. Flammable liquid and vapor. Harmful if inhaled. May be harmful if swallowed or in contact with skin. Causes mild skin irritation. May cause an allergic skin reaction. Suspected of causing cancer. May cause respiratory irritation. Harmful to aquatic life. Prolonged or repeated contact may dry skin and cause irritation.

IF exposed or concerned: Get medical attention. IF INHALED: Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Call a POISON CENTER or physician if you feel unwell. If skin irritation or rash occurs: Get medical attention.

#### See Section 12 for environmental precautions.

## Product name SIGMADUR GLOSS/520/550 HARDENER

Section 2. Hazard	Is identification
Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 5 ACUTE TOXICITY (dermal) - Category 5 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 3 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 AQUATIC HAZARD (ACUTE) - Category 3 Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 10.3% (Inhalation)
GHS label elements	
Hazard pictograms	
Signal word	: Warning
Hazard statements	<ul> <li>Flammable liquid and vapor. Harmful if inhaled. May be harmful if swallowed or in contact with skin. Causes mild skin irritation. May cause an allergic skin reaction. Suspected of causing cancer. May cause respiratory irritation. Harmful to aquatic life.</li> </ul>
Precautionary statements	
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Contaminated work clothing should not be allowed out of the workplace.
Response	: IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical attention.
Suitable extinguishing media	: Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
Storage	: Store locked up. Store in a well-ventilated place. Keep cool.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.

## Section 2. Hazards identification

Physical and chemical	: Flammable liquid and vapor.
hazards	

Health hazards

: Harmful if inhaled. May be harmful if swallowed or in contact with skin. Causes mild skin irritation. Prolonged or repeated contact may dry skin and cause irritation. May cause an allergic skin reaction. Suspected of causing cancer. May cause respiratory irritation.

#### 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 dryness cracking
Ingestion	: No specific data.

Delayed and immediate effec	ts and also chronic effects from short and long term exposure
Short term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
<u>Long term exposure</u>	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Environmental hazards	: Harmful to aquatic life.
Other hazards which do not result in classification	: 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
✓examethylene diisocyanate, oligomers. 2-methoxy-1-methylethyl acetate xylene isomers mixture ethylbenzene	70 - 100 10 - <25 1 - <10 1 - <10	28182-81-2 108-65-6 1330-20-7 100-41-4

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Product name SIGMADUR GLOSS/520/550 HARDENER

## Section 3. Composition/information on ingredients

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 necessa	ary first aid measures
Eye contact	: Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
Inhalation	<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 recognized skin cleanser. Do NOT use solvents or thinners.</li> </ul>
Ingestion	<ul> <li>If swallowed, seek medical advice immediately and show this container or label.</li> <li>Keep person warm and at rest. Do NOT induce vomiting.</li> </ul>

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

Potential acute health effect	s	
Eye contact		No known significant effects or critical hazards.
Inhalation		Harmful if inhaled. May cause respiratory irritation.
Skin contact		May be harmful in contact with skin. Causes mild skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	1	May be harmful if swallowed.
Over-exposure signs/sympt	om	<u>IS</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
Skin contact	:	Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	;	No specific data.
Indication of immediate medio	cal	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.

## Section 4. First aid measures

<ul> <li>Protection of first-aiders</li> <li>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.</li> </ul>

#### See toxicological information (Section 11)

## 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. 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.
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 proceduresFor non-emergency<br/>personnel: No action shall be taken involving any personal risk or without suitable training.<br/>Evacuate surrounding areas. Keep unnecessary and unprotected personnel from<br/>entering. Do not touch or walk through spilled material. Shut off all ignition sources.<br/>No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide<br/>adequate ventilation. Wear appropriate respirator when ventilation is inadequate.<br/>Put on appropriate personal protective equipment.For emergency responders: If specialized clothing is required to deal with the spillage, take note of any<br/>information in Section 8 on suitable and unsuitable materials. See also the<br/>information in "For non-emergency personnel".

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## Section 6. Accidental release measures

·	: 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). Water polluting material. May be harmful to the environment if released in large quantities.
Methods and materials for co	
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.
Special provisions	: Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

## Section 7. Handling and storage

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

## Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities
 Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Precautions should be taken to minimize exposure to atmospheric humidity or water. CO<sub>2</sub> will be formed, which, in closed containers, could result in pressurization.

## Section 8. Exposure controls/personal protection

#### Control parameters

#### **Occupational exposure limits**

Image: System System       GBZ 2.1 (China, 4/2007).         PC-STEL: 100 mg/m³ 15 minutes.       PC-TWA: 50 mg/m³ 16 hours.         Recommended monitoring       : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.         Appropriate engineering controls       : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other controls to keep gas, vapor or dust concentrations below any recommended or statutory limits. The engineering controls way recommended or statutory limits. The engineering controls and receptor explosive limits. Use explosion-proof ventilation equipment.         Environmental exposure       : 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       : 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 close to the work load to main add clothing. Contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the work loadin.         Eye protection       : Safety glasses with sid	Ingredient name		Exposure limits
proceduresatmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.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: 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 before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.Eye protection: Safety glasses with side shields.			PC-STEL: 100 mg/m <sup>3</sup> 15 minutes. PC-TWA: 50 mg/m <sup>3</sup> 8 hours. <b>GBZ 2.1 (China, 4/2007).</b> PC-STEL: 150 mg/m <sup>3</sup> 15 minutes.
controlsor 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. 		atmosphere or biological monitoring m of the ventilation or other control meas protective equipment. Reference shou standards. Reference to national guid	hay be required to determine the effectiveness sures and/or the necessity to use respiratory uld be made to appropriate monitoring ance documents for methods for the
controlsthey 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 measuresWash 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 protection:Safety glasses with side shields.		or other engineering controls to keep v below any recommended or statutory keep gas, vapor or dust concentrations	worker exposure to airborne contaminants limits. The engineering controls also need to s below any lower explosive limits. Use
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 protection: Safety glasses with side shields.	· · · · · · · · · · · · · · · · · · ·	they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment	
<ul> <li>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.</li> <li>Eye protection : Safety glasses with side shields.</li> </ul>	ndividual protection measures		
	Hygiene measures :	eating, smoking and using the lavatory Appropriate techniques should be use Contaminated work clothing should no contaminated clothing before reusing.	v and at the end of the working period. d to remove potentially contaminated clothing. of be allowed out of the workplace. Wash Ensure that eyewash stations and safety
Skin protection	Eye protection :	Safety glasses with side shields.	
	Skin protection		

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## Section 8. Exposure controls/personal 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	: By spraying: air-fed respirator. By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	: Liquid.
Color	: Colorless.
Odor	: Aromatic.
Boiling point	: >37.78°C (>100°F)
Flash point	: Closed cup: 32°C (89.6°F)
Lower and upper explosive (flammable) limits	: Øreatest known range: Lower: 0.8% Upper: 6.7% (xylene )
Relative density	: 1.07
Solubility	: Insoluble in the following materials: cold water.
Viscosity	: Kinematic (40°C): >0.21 cm²/s

# 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	: In a fire, hazardous decomposition products may be produced.
Incompatible materials	: Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.

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## Section 10. Stability and reactivity

# Hazardous decomposition products

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

## Section 11. Toxicological information

## Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hexamethylene diisocyanate, oligomers.	LD50 Dermal	Rabbit	>2000 mg/kg	-
5	LD50 Oral	Rat -	>2500 mg/kg	-
		Female		
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
xylene isomers mixture	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
-	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
viene isomers mixture	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

### **Sensitization**

Not available.

#### **Mutagenicity**

Not available.

#### **Carcinogenicity**

Not available.

#### **Reproductive toxicity**

Not available.

#### Teratogenicity

Not available.

ethylbenzene

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

Name	Category	Route of exposure	Target organs
revamethylene diisocyanate, oligomers.	Category 3	Not applicable.	Respiratory tract irritation
Specific target organ toxicity (repeated exposure)	-		
Name	Category	Route of exposure	Target organs

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Category 2

Not determined

Not determined

## Section 11. Toxicological information

#### **Aspiration hazard**

Name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure	Not available.
Potential acute health ef	ffects
Eye contact	: No known significant effects or critical hazards.
Inhalation	: Harmful if inhaled. May cause respiratory irritation.
Skin contact	: May be harmful in contact with skin. Causes mild skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	: May be harmful if swallowed.
Symptoms related to the Eye contact	<ul> <li>physical, chemical and toxicological characteristics</li> <li>Adverse symptoms may include the following: pain or irritation watering redness</li> </ul>

	reaness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	: No specific data.

Delayed and immediate effec	ts a	and also chronic effects from short and long term exposure		
<u>Short term exposure</u>				
Potential immediate effects	:	Not available.		
Potential delayed effects	:	Not available.		
<u>Long term exposure</u>				
Potential immediate effects	1	Not available.		
Potential delayed effects	:	Not available.		
Potential chronic health effects				
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	1	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.		
Mutagenicity	1	No known significant effects or critical hazards.		
Teratogenicity	1	No known significant effects or critical hazards.		
<b>Developmental effects</b>	1	No known significant effects or critical hazards.		
Fertility effects	1	No known significant effects or critical hazards.		

## Section 11. Toxicological information

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
GMADUR GLOSS/520/550 HARDENER	2941.3	2504.9	N/A	11.1	1.5
Hexamethylene diisocyanate, oligomers.	2500	2500	N/A	11	1.5
2-methoxy-1-methylethyl acetate	8532	N/A	N/A	N/A	N/A
xylene isomers mixture	4300	1100	N/A	11	1.5
ethylbenzene	3500	17800	N/A	17.8	1.5

## Section 12. Ecological information

Toxicity			
Product/ingredient name	Result	Species	Exposure
✓examethylene diisocyanate, oligomers.	Acute EC50 >1000 mg/l	Algae - scenedesmus subspicatus	72 hours
-	Acute EC50 >100 mg/l	Daphnia - daphnia magna	48 hours
	Acute LC50 >100 mg/l	Fish - Danio rerio (zebra fish)	96 hours
2-methoxy-1-methylethyl acetate	Acute LC50 161 mg/l Fresh water	Fish	96 hours
ethylbenzene	Acute LC50 150 to 200 mg/l Fresh water	Fish	96 hours

#### Persistence/degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hexamethylene diisocyanate, oligomers.	-	-	Not readily
xylene isomers mixture ethylbenzene	-	-	Readily Readily

#### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
Hexamethylene diisocyanate, oligomers.	-	3.2	low
2-methoxy-1-methylethyl acetate	0.56	-	low
xylene isomers mixture ethylbenzene	3.16 3.15	7.4 to 18.5 79.43	low low

#### Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

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## Section 12. Ecological information

Other adverse effects

: No known significant effects or critical hazards.

## Section 13. Disposal considerations

: The generation of waste should be avoided or minimized wherever possible. **Disposal methods** 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

	China	UN	IMDG	IATA
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3
Packing group	Ш	Ш	Ш	Ш
Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

#### Additional information

CN	: None identified.
UN	: None identified.
IMDG	: None identified.
ΙΑΤΑ	: None identified.

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.

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## Section 15. Regulatory information

China inventory (IECSC)	: All components are listed or exempted.
References	<ul> <li>Production Safety Law of the People's Republic of China Code of Occupational Disease Prevention of the People's Republic of China Environmental Protection Law of the People's Republic of China Fire Control Law of the People's Republic of China Regulations on the Control over Safety of Dangerous Chemicals Occupational exposure limits for hazardous agents in the workplace chemical hazardous agents (GBZ2.1) General rule for classification and hazard communication of chemicals (GB13690) Safety data sheet for chemical products - Content and order of sections (GB/T16483) Guidance on the compilation of safety data sheet for chemical products (GB/T17519) General rule for preparation of precautionary label for chemicals (GB15258) Safety rules for classification, precautionary labeling and precautionary statements of chemicals (GB30000.2-29)</li> </ul>

## Section 16. Other information

<u>History</u>	
Date of issue/Date of revision	: 12 October 2019
Date of previous issue	: 5/8/2019
Version	: 2.01 EHS
Key to abbreviations	<ul> <li>ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway</li> <li>ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road</li> <li>ATE = Acute Toxicity Estimate</li> <li>BCF = Bioconcentration Factor</li> <li>GHS = Globally Harmonized System of Classification and Labelling of Chemicals</li> <li>IATA = International Air Transport Association</li> <li>IMDG = International Maritime Dangerous Goods</li> <li>LogPow = logarithm of the octanol/water partition coefficient</li> <li>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)</li> <li>RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail</li> <li>UN = United Nations</li> </ul>

✓ Indicates information that has changed from previously issued version.

#### Notice to reader

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