SAFETY DATA SHEET

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



Date of issue/Date of revision 5 July 2021

Version 2

Section 1. Chemical product and company identification			
Product code	: 000001099326		
Product name	: SIGMAGLIDE 890 HARDENER		
Product name	: SIGMAGLIDE 890 HARDENER		
Other means of identification	: 00240642		
Product type	: Liquid.		
Relevant identified uses of the 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

Liquid. Colorless. Aromatic. Flammable liquid and vapor. Harmful if swallowed or in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Toxic if inhaled. May cause respiratory irritation. Suspected of causing genetic defects. May damage fertility or the unborn child. May cause damage to organs. May cause damage to organs through prolonged or repeated exposure. (immune system) Toxic to aquatic life. Toxic to aquatic life with long lasting effects. Prolonged or repeated contact may dry skin and cause irritation.

Section 2. Hazards identification

F exposed or concerned: Call a POISON CENTER or doctor. IF INHALED: Call a POISON CENTER or doctor. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Immediately call a POISON CENTER or doctor.

See Section 12 for environmental precautions.

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Classification of the substance or mixture	 FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 GERM CELL MUTAGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
	Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 3%
	Percentage of the mixture consisting of ingredient(s) of unknown bazards to the

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 96.3%

GHS label elements Hazard pictograms

Signal word



Hazard statements	 Flammable liquid and vapor. Harmful if swallowed or in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Toxic if inhaled. May cause respiratory irritation. Suspected of causing genetic defects. May damage fertility or the unborn child. May cause damage to organs. May cause damage to organs through prolonged or repeated exposure. (immune system) Toxic to aquatic life
	Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statements

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Section 2 Hazards identification

Prevention	: Detain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
Response	: Collect spillage. IF exposed or concerned: Call a POISON CENTER or doctor. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Storage	: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Physical and chemical hazards	: Flammable liquid and vapor.
Health hazards	: Harmful if swallowed or in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Toxic if inhaled. May cause respiratory irritation. Suspected of causing genetic defects. May damage fertility or the unborn child. Prolonged or repeated contact may dry skin and cause irritation.
Symptoms related to the pl	nysical, 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 reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations

Section 2. Hazards identification

Ingestion	: Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations
Delayed and immediate effect	ts and also chronic effects from short and long term exposure
Short term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Long term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Environmental hazards	: Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
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
Other means of	: 00240642
identification	

CAS number/other identifiers

CAS number : Not applicable.		
Ingredient name	%	CAS number
pentane-2,4-dione	40 - <70	123-54-6
tetraethyl silicate	40 - <70	78-10-4
dibutylbis(pentane-2,4-dionato-O,O')tin	1 - <10	22673-19-4

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 necessar	<u>y first aid measures</u>
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 recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion	: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
Most important sympton	ns/effects, acute and delayed
Potential acute health	effects
Eye contact	: Causes serious eye damage.
Inhalation	: Toxic if inhaled. May cause respiratory irritation.
Skin contact	: Harmful in contact with skin. May cause damage to organs following a single exposure in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	: Harmful if swallowed. May cause damage to organs following a single exposure if swallowed.
<u>Over-exposure signs/s</u>	<u>ymptoms</u>
Eye contact	: Adverse symptoms may include the following: pain watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations
Indication of immediate	medical attention and special treatment needed, if necessary
Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.

thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures	5
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Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , 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 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 metal oxide/oxides
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Version 2

Product name SIGMAGLIDE 890 HARDENER

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

- Small spill
 Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
 Large spill
 Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into
 - 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 noncombustible, 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.

Section 7. Handling and storage

Precautions for safe handling	: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. 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.
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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational 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 to eallowed out of the workplace. Wash contaminated work clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.Epse protection: Chemical splash goggles and face shield.	Ingredient name			Exposure limits	
dibutylbis(pentane-2,4-dionato-O,O')tin TWA: 10 ppm 8 hours: ACGHT TLV (United States). Absorbed through skin. STEL: 0.2 mg/m ³ Recommended monitoring procedures : 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 determinants below any recommended or statutory limits. The engineering controls to keep worker exposure to aiborne controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Les explosion-proof ventilation equipment. Environmental exposure : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to aiborne contaminats 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 : 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 scrubpers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. dividual protection : Chemical-resistant, impervious gloves complying with an approved standard should be working period. Appropriate techniques should be used to remove potentiling and using the lavatory and at the end of th			Absorbed through skin. TWA: 25 ppm 8 hours. ACGIH TLV (United States, 3/2020).		
through skin. STEL: 0.2 mg/m³ ACGHI TLV (United States, 3/2020). Absorbed through skin. TWA: 0.1 mg/m³, (as Sn) 8 hours. STEL: 0.2 mg/m³, (as Sn) 8 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 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 ervork 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. adividual protection measures : Hygiene measures : Hygiene measures : Skin protection : Chemical splash goggles and face shield. Skin protection : Skin p	dibutvlbis(pentane-2.4-dionato	o-O	.O')tin	TWA: 10 ppm 8 hours.	orbed
procedures 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 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 : 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. ndividual 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 : Chemical-resistant, impervious gloves complying with an approved standard should be worm 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 th		_		through skin. STEL: 0.2 mg/m ³ ACGIH TLV (United States, 3/202 Absorbed through skin. TWA: 0.1 mg/m ³ , (as Sn) 8 hours	20). 5.
controlsventilation 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.Idividual 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 protection 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	Recommended monitoring procedures		atmosphere or biological monitoring n of the ventilation or other control meas protective equipment. Reference sho standards. Reference to national guid	hay be required to determine the eff sures and/or the necessity to use re uld be made to appropriate monitor dance documents for methods for th	fectiveness espiratory ing
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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: Chemical splash goggles and face shield.Skin 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	controls they comply with the requirements of cases, fume scrubbers, filters or eng		they comply with the requirements of cases, fume scrubbers, filters or engin	environmental protection legislation neering modifications to the process	. In some
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 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 	Eye protection	:	Chemical splash goggles and face sh	ield.	
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China Page: 8/4	Gloves	:	butyl rubber		
				China	Page 8/1

Section 8. Exposure controls/personal protection

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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	: 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. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

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: 30°C (86°F)
Lower and upper explosive (flammable) limits	: Greatest known range: Lower: 1.3% Upper: 23% (tetraethyl silicate)
Relative density	: 0.97
Solubility	: Insoluble in the following materials: cold water.
Auto-ignition temperature	: 335°C (635°F)
Viscosity	: Kinematic (40°C): >21 mm²/s
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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	: When exposed to high temperatures may produce hazardous decomposition products.
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products	: Depending on conditions, decomposition products may include the following materials: carbon oxides metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
pentane-2,4-dione	LC50 Inhalation Vapor	Rat	5.1 mg/l	4 hours
	LD50 Dermal	Rat	790 mg/kg	-
	LD50 Oral	Rat	570 mg/kg	-
tetraethyl silicate	LC50 Inhalation Dusts	Rat	10 to 16 mg/l	4 hours
-	and mists		C C	
	LD50 Dermal	Rabbit	5.878 g/kg	-
	LD50 Oral	Rat	6270 mg/kg	-
dibutylbis(pentane-2,4-dionato- O,O')tin	LD50 Dermal	Rat	>2000 mg/kg	-
-,-,-	LD50 Oral	Rat	1864 mg/kg	-

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name		Route of exposure	Target organs
tetraethyl silicate	Category 3		Respiratory tract irritation
dibutylbis(pentane-2,4-dionato-O,O')tin	Category 1	-	-

Specific target organ toxicity (repeated exposure)

Name		Route of exposure	Target organs
dibutylbis(pentane-2,4-dionato-O,O')tin	Category 1	-	immune system

Aspiration hazard

Not available.

Information on the likely : Not available.

routes of exposure

Potential acute health effects

Eye contact : Causes serious eye damage.

Section 11. Toxicological information

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Inhalation	: Toxic if inhaled. May cause respiratory irritation.
Skin contact	 Harmful in contact with skin. May cause damage to organs following a single exposure in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	: Harmful if swallowed. May cause damage to organs following a single exposure 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 reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

Delayed and immediate effect	d also chron	ic effects from short and long term exposure
Short term exposure		
Potential immediate effects	ot available.	
Potential delayed effects	ot available.	
Long term exposure		
Potential immediate effects	ot available.	
Potential delayed effects	ot available.	
Potential chronic health eff		
General	r repeated co ermatitis. On	nage to organs through prolonged or repeated exposure. Prolonged ntact can defat the skin and lead to irritation, cracking and/or ce sensitized, a severe allergic reaction may occur when xposed to very low levels.
Carcinogenicity	o known sign	ificant effects or critical hazards.
Mutagenicity	uspected of c	ausing genetic defects.
Reproductive toxicity	lay damage fe	ertility or the unborn child.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	(gases)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
GMAGLIDE 890 HARDENER pentane-2,4-dione tetraethyl silicate dibutylbis(pentane-2,4-dionato-O,O')tin	1062.4 570 6270 1864	1471.6 790 5878 2500	N/A N/A	9.7 5.1 N/A N/A	N/A N/A N/A N/A

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 vapor/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.

Section 12. Ecological information

Toxicity

Not available.

Persistence/degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
pentane-2,4-dione	0.68	-	low
tetraethyl silicate	3.18		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 minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and

Product code 000001099326 Product name SIGMAGLIDE 890 HARDENER

Section 13. Disposal considerations

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	ΙΑΤΑ
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
Transport hazard class(es)	3	3	3	3
Packing group	Ш	Ш	Ш	Ш
Environmental hazards Marine pollutant	Yes. The environmentally hazardous substance mark is not required. Not applicable.	Yes. The environmentally hazardous substance mark is not required. Not applicable.	Yes. (dibutylbis(pentane-	Yes. The environmentally hazardous substance mark is not required. Not applicable.
substances		Not applicable.	2,4-dionato-O,O')tin)	

Additional information

/ aantional ii				
CN	: None identified.			
UN	: None identified.			
IMDG	The marine pollutant mark is not required when transported in sizes of ≤ 5 L or ≤ 5 kg.			
ΙΑΤΑ	: The environmentally hazardous substance mark may appear if required by other transportation regulations.			
Special pred	cautions 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

Section 15. Regulatory information

China inventory (IECSC) : All components are listed or exempted.

Section 15. Regulatory information

Poforonooo	Production Safety Law of the Deeple's Populatio of China
References	: 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)

Section 16. Other information

<u>History</u>	
Date of issue/Date of revision	: 5 July 2021
Date of previous issue	: 1/27/2021
Version	: 2
	EHS
Key to abbreviations	 ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association 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) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail UN = United Nations

✓ 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 PPG, 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.