

# SAFETY DATA SHEET



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: 2.01

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : SIGMAGLIDE 1290 HARDENER

**Product code** : 00332868

**Product type** : Liquid.

**Other means of identification**

Not available.

### 1.2 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** : Product is not intended, labelled or packaged for consumer use.

### 1.3 Details of the supplier of the safety data sheet

La Seigneurie Pacifique  
BP32017, 98897, Noumea  
New Caledonia  
Tel: 00687 28 15 44  
Fax: 00687 28 16 60

**e-mail address of person  
responsible for this SDS** : PS.ACEMEA@ppg.com

**1.4 Emergency telephone  
number** : ORFILA (INRS) 0033 (0)1 45 42 59 59

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Flam. Liq. 3, H226

Acute Tox. 4, H302

Acute Tox. 4, H332

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Skin Sens. 1, H317

Muta. 2, H341

Repr. 1B, H360FD

STOT SE 2, H371

STOT RE 2, H373

Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**SECTION 2: Hazards identification****Hazard pictograms****Signal word**

: Danger

**Hazard statements**

: Flammable liquid and vapour.  
 Harmful if swallowed or if inhaled.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Causes serious eye irritation.  
 Suspected of causing genetic defects.  
 May damage fertility. May damage the unborn child.  
 May cause damage to organs.  
 May cause damage to organs through prolonged or repeated exposure.  
 Toxic to aquatic life with long lasting effects.

**Precautionary statements****Prevention**

: 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. Avoid release to the environment. Do not breathe vapour.

**Response**

: Collect spillage. IF exposed or concerned: Get medical advice or attention.

**Storage**

: Not applicable.

**Disposal**

: Not applicable.

**Hazardous ingredients**

: pentane-2,4-dione  
 dibutylbis(pentane-2,4-dionato-O,O')tin

**Supplemental label elements**

: Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

: Restricted to professional users.

**Special packaging requirements****Containers to be fitted with child-resistant fastenings**

: Not applicable.

**Tactile warning of danger**

: Not applicable.

**2.3 Other hazards****Product meets the criteria for PBT or vPvB**

: This mixture contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.

**Other hazards which do not result in classification**

: None known.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

: Mixture

**SECTION 3: Composition/information on ingredients**

Product/ingredient name	Identifiers	% by weight	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
pentane-2,4-dione	REACH #: 01-2119458968-15 EC: 204-634-0 CAS: 123-54-6 Index: 606-029-00-0	≥25 - ≤38	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 3, H331	[1]
Siloxanes and Silicones, di-Me, 3-hydroxypropyl Me, ethers with polyethylene glycol mono-Me ether dibutylbis(pentane-2,4-dionato-O, O')tin	CAS: 68938-54-5	≥10 - ≤25	Acute Tox. 4, H332 Aquatic Chronic 2, H411	[1]
	REACH #: 01-2119557817-24 EC: 245-152-0 CAS: 22673-19-4 Index: 650-056-00-0	≥1.0 - <3.0	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360FD STOT SE 1, H370 STOT RE 1, H372 (immune system) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1] [2]
toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	<1.0	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304	[1] [2]
octamethylcyclotetrasiloxane	REACH #: 01-2119529238-36 EC: 209-136-7 CAS: 556-67-2 Index: 014-018-00-1	≤1.0	Repr. 2, H361f Aquatic Chronic 1, H410 (M=10)	[1] [3] [4]
decamethylcyclopentasiloxane	REACH #: 01-2119511367-43 EC: 208-764-9 CAS: 541-02-6	≤1.0	Not classified.	[3] [4]
methanol	REACH #: 01-2119433307-44 EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	≤0.14	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370	[1] [2]

See Section 16 for the full text of the H statements declared above.

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

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

**SUB codes represent substances without registered CAS Numbers.**

**SECTION 4: First aid measures****4.1 Description of 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** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- 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.

**4.2 Most important symptoms and effects, both acute and delayed****Potential acute health effects**

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled.
- Skin contact** : May cause damage to organs following a single exposure in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed. May cause damage to organs following a single exposure if swallowed.

**Over-exposure signs/symptoms**

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations

**4.3 Indication of any immediate medical attention and special treatment needed**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

**SECTION 5: Firefighting measures****5.1 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.

**5.2 Special hazards arising from the substance or mixture**

**Hazards from the substance or mixture** : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon oxides  
metal oxide/oxides

**5.3 Advice for firefighters**

**Special precautions 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

**6.3 Methods and material for containment and cleaning up**

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

**SECTION 6: Accidental release measures**

- 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**7.1 Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. 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 vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities**

- : Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**7.3 Specific end use(s)**

See Section 1.2 for Identified uses.

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
dibutylbis(pentane-2,4-dionato-O,O')tin	<b>Ministry of Labor (France, 3/2020).</b> TWA: 0.1 mg/m <sup>3</sup> , (as Sn) 8 hours. STEL: 0.2 mg/m <sup>3</sup> , (as Sn) 15 minutes.
toluene	<b>Ministry of Labor (France, 3/2020). Absorbed through skin.</b> STEL: 384 mg/m <sup>3</sup> 15 minutes. Form: Risk for sensitisation STEL: 100 ppm 15 minutes. Form: Risk for sensitisation TWA: 76.8 mg/m <sup>3</sup> 8 hours. Form: Risk for sensitisation
methanol	<b>Ministry of Labor (France, 3/2020). Absorbed through skin.</b> STEL: 1300 mg/m <sup>3</sup> 15 minutes. Form: Risk for sensitisation STEL: 1000 ppm 15 minutes. Form: Risk for sensitisation TWA: 260 mg/m <sup>3</sup> 8 hours. Form: Risk for sensitisation TWA: 200 ppm 8 hours. Form: Risk for sensitisation

**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 monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs

Product/ingredient name	Type	Exposure	Value	Population	Effects	
pentane-2,4-dione	DNEL	Long term Oral	7 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	12 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	84 mg/m <sup>3</sup>	Workers	Systemic	
	dibutylbis(pentane-2,4-dionato-O,O')tin	DNEL	Long term Oral	0.002 mg/kg bw/day	General population	Systemic
		DNEL	Long term Inhalation	0.003 mg/m <sup>3</sup>	General population	Systemic
		DNEL	Short term Oral	0.01 mg/kg bw/day	General population	Systemic
		DNEL	Long term Inhalation	0.01 mg/m <sup>3</sup>	Workers	Systemic
		DNEL	Short term Inhalation	0.02 mg/m <sup>3</sup>	General population	Systemic
		DNEL	Short term Inhalation	0.07 mg/m <sup>3</sup>	Workers	Systemic
	toluene	DNEL	Long term Dermal	0.08 mg/kg bw/day	General population	Systemic
DNEL		Long term Dermal	0.2 mg/kg bw/day	Workers	Systemic	
DNEL		Short term Dermal	0.5 mg/kg bw/day	General population	Systemic	
DNEL		Short term Dermal	1 mg/kg bw/day	Workers	Systemic	
DNEL		Long term Oral	8.13 mg/kg bw/day	General population	Systemic	
DNEL		Long term Inhalation	56.5 mg/m <sup>3</sup>	General	Local	

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**SECTION 8: Exposure controls/personal protection**

octamethylcyclotetrasiloxane	DNEL	Long term Inhalation	56.5 mg/m <sup>3</sup>	population General population	Systemic
	DNEL	Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	192 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	226 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	226 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	226 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	384 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	384 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	384 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Oral	3.7 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	3.7 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	13 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	13 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	13 mg/m <sup>3</sup>	General population	Systemic
decamethylcyclopentasiloxane	DNEL	Long term Inhalation	13 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	73 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	73 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	73 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	73 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	4.3 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	4.3 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	17.3 mg/m <sup>3</sup>	General population	Systemic
methanol	DNEL	Long term Inhalation	17.3 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	24.2 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	24.2 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	97.3 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	97.3 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Dermal	8 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	8 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	50 mg/m <sup>3</sup>	General population	Local
DNEL	Long term Inhalation	50 mg/m <sup>3</sup>	General population	Local	
DNEL	Short term Inhalation	50 mg/m <sup>3</sup>	General population	Systemic	
DNEL	Long term Inhalation	50 mg/m <sup>3</sup>	General population	Systemic	



## SECTION 8: Exposure controls/personal protection

	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	260 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	260 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	260 mg/m <sup>3</sup>	Workers	Systemic

### PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
pentane-2,4-dione	-	Fresh water	0.026 mg/l	-
	-	Fresh water sediment	0.155 mg/kg dwt	-
	-	Marine water	0.0026 mg/l	-
	-	Marine water sediment	0.0155 mg/kg dwt	-
	-	Soil	0.01582 mg/kg dwt	-
toluene	-	Sewage Treatment Plant	1.32 mg/l	-
	-	Fresh water	0.68 mg/l	Sensitivity Distribution
	-	Marine water	0.68 mg/l	Sensitivity Distribution
methanol	-	Sewage Treatment Plant	13.61 mg/l	Sensitivity Distribution
	-	Fresh water sediment	16.39 mg/kg dwt	Equilibrium Partitioning
	-	Marine water sediment	16.39 mg/kg dwt	-
	-	Fresh water	20.8 mg/l	Assessment Factors
	-	Marine water	2.08 mg/l	Assessment Factors
	-	Sewage Treatment Plant	100 mg/l	Assessment Factors
	-	Fresh water sediment	77 mg/kg	Equilibrium Partitioning
-	Marine water sediment	7.7 mg/kg	Equilibrium Partitioning	
-	Soil	100 mg/kg	Assessment Factors	

## 8.2 Exposure controls

### 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.

### Individual protection measures

#### Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection

: Chemical splash goggles. Use eye protection according to EN 166.

### 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. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

#### Gloves

: butyl rubber

**SECTION 8: Exposure controls/personal protection**

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- 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. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3
- 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.

**SECTION 9: Physical and chemical properties**

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

**9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid.
- Colour** : Colourless.
- Odour** : Amine-like.
- Odour threshold** : Not available.
- pH** : insoluble in water.
- Melting point/freezing point** : May start to solidify at the following temperature: 25.1°C (77.2°F) This is based on data for the following ingredient: dibutylbis(pentane-2,4-dionato-O,O')tin. Weighted average: -28.94°C (-20.1°F)
- Initial boiling point and boiling range** : >37.78°C
- Flash point** : Closed cup: 34°C
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : liquid
- Upper/lower flammability or explosive limits** : Greatest known range: Lower: 2.4% Upper: 11.6% (pentane-2,4-dione)

**Vapour pressure**

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
pentane-2,4-dione	6.98	0.93				

- Vapour density** : Highest known value: 3.45 (Air = 1) (pentane-2,4-dione).
- Relative density** : 1.04
- Solubility(ies)** : Insoluble in the following materials: cold water.
- Partition coefficient: n-octanol/water** : Not applicable.

**SECTION 9: Physical and chemical properties**

<b>Auto-ignition temperature</b>	<b>Ingredient name</b>	<b>°C</b>	<b>°F</b>	<b>Method</b>
	pentane-2,4-dione	340	644	

**Decomposition temperature** : Stable under recommended storage and handling conditions (see Section 7).  
**Viscosity** : Kinematic (40°C): >21 mm<sup>2</sup>/s  
**Explosive properties** : Product does not present an explosion hazard.  
**Oxidising properties** : Product does not present an oxidizing hazard.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
- 10.5 Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
- 10.6 Hazardous decomposition products** : Depending on conditions, decomposition products may include the following materials: carbon oxides metal oxide/oxides

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
pentane-2,4-dione	LC50 Inhalation Vapour	Rat	5.1 mg/l	4 hours
	LD50 Dermal	Rat	790 mg/kg	-
	LD50 Oral	Rat	570 mg/kg	-
dibutylbis(pentane-2,4-dionato-O,O')tin	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	1864 mg/kg	-
toluene	LC50 Inhalation Vapour	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LD50 Oral	Rat	5580 mg/kg	-
octamethylcyclotetrasiloxane	LC50 Inhalation Vapour	Rat	36 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	>4800 mg/kg	-
decamethylcyclopentasiloxane	LC50 Inhalation Dusts and mists	Rat	8.67 mg/l	4 hours
	LD50 Dermal	Rabbit	>15.3 g/kg	-
	LD50 Oral	Rat	>24134 mg/kg	-
methanol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LC50 Inhalation Vapour	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-

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

**SECTION 11: Toxicological information****Acute toxicity estimates**

Route	ATE value
Oral	1467.22 mg/kg
Dermal	2098.02 mg/kg
Inhalation (vapours)	10.42 mg/l

**Irritation/Corrosion****Conclusion/Summary**

**Skin** : There are no data available on the mixture itself.

**Eyes** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

**Sensitisation****Conclusion/Summary**

**Skin** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

**Mutagenicity**

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

**Carcinogenicity**

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

**Reproductive toxicity**

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

**Teratogenicity**

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

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

Product/ingredient name	Category	Route of exposure	Target organs
dibutylbis(pentane-2,4-dionato-O,O')tin	Category 1	-	-
toluene	Category 3	-	Narcotic effects
methanol	Category 1	-	-

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

Product/ingredient name	Category	Route of exposure	Target organs
dibutylbis(pentane-2,4-dionato-O,O')tin	Category 1	-	immune system
toluene	Category 2	-	-

**Aspiration hazard**

Product/ingredient name	Result
toluene	ASPIRATION HAZARD - Category 1

**Information on likely routes of exposure** : Not available.

**Potential acute health effects**

**Inhalation** : Harmful if inhaled.

**Ingestion** : Harmful if swallowed. May cause damage to organs following a single exposure if swallowed.

**Skin contact** : May cause damage to organs following a single exposure in contact with skin. Causes skin irritation. May cause an allergic skin reaction.

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

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

**SECTION 11: Toxicological information**

- Inhalation** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations
- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Delayed and immediate effects as well as 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.

**Potential chronic health effects**

Not available.

**Conclusion/Summary** : Not available.

**General** : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

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

**Mutagenicity** : Suspected of causing genetic defects.

**Reproductive toxicity** : May damage fertility. May damage the unborn child.

**Other information** : Not available.

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.

**SECTION 12: Ecological information****12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
methanol	Acute LC50 13 mg/l Fresh water	Fish	96 hours

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

**12.2 Persistence and degradability**

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

**SECTION 12: Ecological information**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
toluene	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
pentane-2,4-dione	0.68	-	low
toluene	2.73	8.32	low
octamethylcyclotetrasiloxane	6.488	-	high
decamethylcyclopentasiloxane	8.023	-	high
methanol	-0.77	-	low

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
pentane-2,4-dione	No	N/A	N/A	No	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, 3-hydroxypropyl Me, ethers with polyethylene glycol mono-Me ether	No	N/A	N/A	No	N/A	N/A	N/A
toluene	No	N/A	No	Yes	No	N/A	No
octamethylcyclotetrasiloxane	SVHC (Candidate)	Specified	Specified	Specified	SVHC (Candidate)	Specified	Specified
decamethylcyclopentasiloxane	SVHC (Candidate)	Specified	Specified	Specified	SVHC (Candidate)	Specified	Specified
methanol	No	N/A	N/A	No	N/A	N/A	N/A

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

**SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**13.1 Waste treatment methods****Product**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

**European waste catalogue (EWC)**

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

**Packaging**

Code : 00332868

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**SECTION 13: Disposal considerations**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)
Container	15 01 06 mixed packaging

**Special precautions** : 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**

	ADR/RID	IMDG	IATA
<b>14.1 UN number</b>	UN1263	UN1263	UN1263
<b>14.2 UN proper shipping name</b>	PAINT	PAINT	PAINT
<b>14.3 Transport hazard class(es)</b>	3	3	3
<b>14.4 Packing group</b>	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
<b>Marine pollutant substances</b>	Not applicable.	(Siloxanes and Silicones, di-Me, 3-hydroxypropyl Me, ethers with polyethylene glycol mono-Me ether, dibutylbis (pentane-2,4-dionato-O,O')tin)	Not applicable.

**Additional information**

**ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**Tunnel code** : (D/E)

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

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

**14.6 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.

**14.7 Transport in bulk according to IMO instruments** : Not applicable.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

**Substances of very high concern**

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Toxic to reproduction	dibutylbis(pentane-2,4-dionato-O,O')tin	Candidate	D(2020) 4578-DC	6/25/2020
PBT	octamethylcyclotetrasiloxane; D4	Candidate	ED/61/2018	6/27/2018
	decamethylcyclopentasiloxane; D5	Candidate	ED/61/2018	6/27/2018
vPvB	octamethylcyclotetrasiloxane; D4	Candidate	ED/61/2018	6/27/2018
	decamethylcyclopentasiloxane; D5	Candidate	ED/61/2018	6/27/2018

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Restricted to professional users.

**Other national and international regulations.****Ozone depleting substances (1005/2009/EU)**

Not listed.

**Seveso Directive**

This product is controlled under the Seveso Directive.

**Danger criteria**

Category
P5c E2

**Social Security Code, Articles L 461-1 to L 461-7** : toluene RG 4bis, RG [1]  
84  
methanol RG 84  
Surveillance médicale spéciale selon l'arrêté du 11 juillet 1977:  
[1] Benzène et homologues  
Pour les applications des peintures et vernis par pulvérisation

**Reinforced medical surveillance** : Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

**References** : Reinforced medical surveillance ; Decree no. 2001-97 of 1 February 2001 establishing specific rules for the prevention of risks from carcinogens, mutagens and reprotoxics and amending the Labour code ; Decree no. 2003-1254 of 23 December 2003 relating to prevention of chemical risks and amending the Labour code ; Decree no. 2004-187 of 26 February 2004 on the placing on the market of biocidal products ; Decree no. 88-1231 of 29/12/1988 relating to poisonous preparations and substances. ; Decree no. 95-517 of 15 May 1997, relating to the classification of dangerous waste. ; Labour code article: R231-53 ; Labour code: Occupational air (ventilation, air purification): Art. R 232-5 to R 232-5-14 ; Labour code: Prevention of chemical risk: Art.R231-51 and R 231-54 to R 231-54-9 ; Labour code: Prevention of fires: Art.R232-12-13 to R 232-12-29 and R 233-30 ; Labour code: provisions applicable to women: Art. L 234-3 to L 236-6 ; Labour code: provisions applicable to young workers: Art. L 234-3 to L 236-6; Art: R234-16 ; Labour code: Sanitary installations: Art. R 232-2 à R 232-2-7 ; Law 76-663 of 19 July 1976 amending and implementing decree of 21 September 1977 relating to



## SECTION 15: Regulatory information

classified installations for the protection of the environment ; Tables of anticipated professional diseases according to article R461-3 of the labour code

### 15.2 Chemical safety assessment

: No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

### Abbreviations and acronyms

: ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Muta. 2, H341	Calculation method
Repr. 1B, H360FD	Calculation method
STOT SE 2, H371	Calculation method
STOT RE 2, H373	Calculation method
Aquatic Chronic 2, H411	Calculation method

### Full text of abbreviated H statements

: H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H311 Toxic in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H331 Toxic if inhaled.  
H332 Harmful if inhaled.  
H336 May cause drowsiness or dizziness.  
H341 Suspected of causing genetic defects.  
H360FD May damage fertility. May damage the unborn child.  
H361d Suspected of damaging the unborn child.  
H361f Suspected of damaging fertility.  
H370 Causes damage to organs.  
H371 May cause damage to organs.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.

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**SECTION 16: Other information**

<b>Full text of classifications [CLP/GHS]</b>	: Acute Tox. 3 Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2 Asp. Tox. 1 Eye Dam. 1 Eye Irrit. 2 Flam. Liq. 2 Flam. Liq. 3 Muta. 2 Repr. 1B Repr. 2 Skin Corr. 1C Skin Irrit. 2 Skin Sens. 1 STOT RE 1  STOT RE 2  STOT SE 1  STOT SE 2  STOT SE 3	ACUTE TOXICITY - Category 3 ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3 GERM CELL MUTAGENICITY - Category 2 REPRODUCTIVE TOXICITY - Category 1B REPRODUCTIVE TOXICITY - Category 2 SKIN CORROSION/IRRITATION - Category 1C SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITISATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
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