



# SAFETY DATA SHEET

DOW FRANCE S.A.S.

Safety Data Sheet according to Reg. (EU) 2020/878

**Product name: SYLGARD™ 567 Primerless Silicone  
Encapsulant Part B**

**Revision Date: 24.11.2021**

**Version: 2.0**

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DOW FRANCE S.A.S. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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### 1.1 Product identifier

**Product name:** SYLGARD™ 567 Primerless Silicone Encapsulant Part B  
**UFI:** SCQA-U097-600E-9GUA

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

**Identified uses:** Electrical industry and electronics

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

#### COMPANY IDENTIFICATION

DOW FRANCE S.A.S.  
23 AVENUE JULES RIMET  
93210 LA PLAINE SAINT-DENIS  
FRANCE

**Customer Information Number:**

(31) 115 67 2626  
SDSQuestion@dow.com

### 1.4 EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 00 33 388 736 000

**Local Emergency Contact:** 00 33 388 736 000

**ORFILA:** + 33 (0)1 45 42 59 59

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## SECTION 2: HAZARDS IDENTIFICATION

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### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008:**

Eye irritation - Category 2 - H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008:**

### Hazard pictograms



**Signal word: WARNING**

#### Hazard statements

H319 Causes serious eye irritation.

#### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.  
No smoking.  
P234 Keep only in original packaging.  
P264 Wash skin thoroughly after handling.  
P280 Wear eye protection/ face protection.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P403 Store in a well-ventilated place.

#### 2.3 Other hazards

May generate flammable hydrogen gas. Avoid contact with water, alcohols, acidic, basic, or oxidizing materials.

This product contains octamethylcyclotetrasiloxane (D4) that has been identified by the Member State Committee of ECHA as fulfilling the PBT and vPvB criteria laid down in Annex XIII to Regulation (EC) No 1907/2006. See Section 12 for additional information.

#### Endocrine disrupting properties

Environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Human Health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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**Chemical nature:** Silicone elastomer

### 3.2 Mixtures

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008

<b>CASRN</b> 14808-60-7 <b>EC-No.</b> 238-878-4 <b>Index-No.</b> –	–	>= 28,0 - <= 35,0 %	Quartz	STOT RE 1; H372 (Lungs)
<b>CASRN</b> 2530-83-8 <b>EC-No.</b> 219-784-2 <b>Index-No.</b> –	01-2119513212-58	>= 1,3 - <= 2,3 %	Glycidoxypropyltrimethoxysilane	Eye Dam. 1; H318 Aquatic Chronic 3; H412  Acute toxicity estimate Acute oral toxicity: 8 025 mg/kg Acute inhalation toxicity: > 5,3 mg/l, 4 Hour, dust/mist Acute dermal toxicity: 4 250 mg/kg
<b>CASRN</b> 556-67-2 <b>EC-No.</b> 209-136-7 <b>Index-No.</b> 014-018-00-1	–	>= 0,022 - <= 0,038 %	octamethylcyclotetrasiloxane [D4]	Flam. Liq. 3; H226 Repr. 2; H361f Aquatic Chronic 1; H410  M-Factor (Chronic aquatic toxicity): 10  Acute toxicity estimate Acute oral toxicity: > 4 800 mg/kg Acute inhalation toxicity: 36 mg/l, 4 Hour, dust/mist Acute dermal toxicity: > 2 400 mg/kg

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air and keep comfortable for breathing; consult a physician.

**Skin contact:** Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

**Eye contact:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Rinse mouth with water. No emergency medical treatment necessary.

**4.2 Most important symptoms and effects, both acute and delayed:**

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

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

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

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## **SECTION 5: FIREFIGHTING MEASURES**

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### **5.1 Extinguishing media**

**Suitable extinguishing media:** Alcohol-resistant foam. Carbon dioxide (CO<sub>2</sub>). Water spray.

**Unsuitable extinguishing media:** Dry chemical.

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

**Hazardous combustion products:** Silicon oxides. Carbon oxides. Formaldehyde.

**Unusual Fire and Explosion Hazards:** Applying foam will release significant amounts of hydrogen gas that can be trapped under the foam blanket.. Exposure to combustion products may be a hazard to health..

### **5.3 Advice for firefighters**

**Fire Fighting Procedures:** Use water spray to cool unopened containers.. Evacuate area.. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations..

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not allow extinguishing medium to contact container contents. Most fire extinguishing media will cause hydrogen evolution, and once the fire is put out, may accumulate in poorly ventilated or confined areas and result in flash fire or explosion if ignited. Remove undamaged containers from fire area if it is safe to do so.

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus.. Use personal protective equipment..

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**6.1 Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

**6.2 Environmental precautions:** Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and materials for containment and cleaning up:** Soak up with inert absorbent material. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Materials in contact with water, moisture, acids or bases have the potential to generate hydrogen gas. Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container.

**6.4 Reference to other sections:**

See sections: 7, 8, 11, 12 and 13.

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## SECTION 7: HANDLING AND STORAGE

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**7.1 Precautions for safe handling:** Avoid inhalation of vapour or mist. Do not swallow. Do not get in eyes. Avoid prolonged or repeated contact with skin. Keep away from water. Protect from moisture. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.

Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

**7.2 Conditions for safe storage, including any incompatibilities:** Keep in properly labelled containers. Store in original container. Product may evolve minute quantities of flammable hydrogen gas which can accumulate. Adequately ventilate to maintain vapors well below flammability limits and exposure guidelines. Do not repackage. Clogged container vents may increase pressure build up. Store in accordance with the particular national regulations. Store in a closed container.

Do not store with the following product types: Strong oxidizing agents.

Unsuitable materials for containers: Do not store in or use containers except the original product package.

**7.3 Specific end use(s):** See the technical data sheet on this product for further information.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Glycidoxypropyltrimethoxysilane	Dow IHG	TWA	0,5 ppm
octamethylcyclotetrasiloxane [D4]	US WEEL	TWA	10 ppm
methanol	ACGIH	TWA	200 ppm
	Further information: Skin: Danger of cutaneous absorption		
	ACGIH	STEL	250 ppm
	Further information: Skin: Danger of cutaneous absorption		
	2006/15/EC	TWA	260 mg/m3 200 ppm
	Further information: Indicative; skin: Identifies the possibility of significant uptake through the skin		
	FR VLE	VME	260 mg/m3 200 ppm
	Further information: Skin: Risk of penetration through skin; REL binding: Regulatory binding exposure limits		
	FR VLE	VLCT (VLE)	1 300 mg/m3 1 000 ppm
	Further information: Skin: Risk of penetration through skin; Indicative exposure limits: Indicative exposure limits		

The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing:

Methanol.

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material.

### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

### Recommended monitoring procedures

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with the Occupational Exposure Limits and the adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples should be analysed by an accredited laboratory.

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.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods.  
 Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods.  
 Health and Safety Executive (HSE), United Kingdom: Methods for the Determination of Hazardous Substances.

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany.

L'Institut National de Recherche et de Sécurité, (INRS), France.

**Derived No Effect Level**

Glycidoxypropyltrimethoxysilane

**Workers**

<i>Acute systemic effects</i>		<i>Acute local effects</i>		<i>Long-term systemic effects</i>		<i>Long-term local effects</i>	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	10 mg/kg bw/day	70,5 mg/m3	n.a.	n.a.

**Consumers**

<i>Acute systemic effects</i>			<i>Acute local effects</i>		<i>Long-term systemic effects</i>			<i>Long-term local effects</i>	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	5 mg/kg bw/day	17 mg/m3	5 mg/kg bw/day	n.a.	n.a.

octamethylcyclotetrasiloxane [D4]

**Workers**

<i>Acute systemic effects</i>		<i>Acute local effects</i>		<i>Long-term systemic effects</i>		<i>Long-term local effects</i>	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	73 mg/m3	n.a.	73 mg/m3

**Consumers**

<i>Acute systemic effects</i>			<i>Acute local effects</i>		<i>Long-term systemic effects</i>			<i>Long-term local effects</i>	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	13 mg/m3	3,7 mg/kg bw/day	n.a.	13 mg/m3

**Predicted No Effect Concentration**

Glycidoxypropyltrimethoxysilane

<b>Compartment</b>	<b>PNEC</b>
Fresh water	0,45 mg/l
Intermittent use/release	0,45 mg/l
Marine water	0,045 mg/l

Sewage treatment plant	8,2 mg/l
Fresh water sediment	1,6 mg/kg dry weight (d.w.)
Marine sediment	0,16 mg/kg dry weight (d.w.)
Soil	0,063 mg/kg dry weight (d.w.)

octamethylcyclotetrasiloxane [D4]

Compartment	PNEC
Fresh water	0,0015 mg/l
Marine water	0,00015 mg/l
Fresh water sediment	3 mg/kg
Marine sediment	0,3 mg/kg
Soil	0,54 mg/kg
Sewage treatment plant	10 mg/l
Oral	41 mg/kg food

## 8.2 Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.

#### Skin protection

**Hand protection:** Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Natural rubber ("latex"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

#### Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	liquid
Color	off-white to beige
Odor	none
Odor Threshold	No data available
pH	Not applicable, substance/mixture is non-soluble (in water)
Melting point/freezing point	
Melting point/range	No data available
Freezing point	not determined
Boiling point or initial boiling point and boiling range	
Boiling point (760 mmHg)	> 100 °C
Flash point	<b>Pensky-Martens closed cup</b> 115,5 °C
Flammability (solid, gas)	Not applicable
Flammability (liquids)	Not applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1,24
Solubility(ies)	
Water solubility	insoluble
Partition coefficient: n-octanol/water	not determined
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic Viscosity	600 cSt at 25 °C
Particle characteristics	
Particle size	Not applicable

### 9.2 Other information

<b>Molecular weight</b>	No data available
<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	The substance or mixture is not classified as oxidizing.
<b>Self-heating substances</b>	The substance or mixture is not classified as self heating.
<b>Metal corrosion rate</b>	Not corrosive to metals
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## SECTION 10: STABILITY AND REACTIVITY

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**10.1 Reactivity:** Not classified as a reactivity hazard.

**10.2 Chemical stability:** Stable under normal conditions.

**10.3 Possibility of hazardous reactions:** Can react with strong oxidizing agents. Product may evolve flammable hydrogen gas on contact with water, alcohols, acidic or basic materials, many metals or metallic compounds and can form explosive mixtures in air. Hazardous decomposition products will be formed at elevated temperatures.

**10.4 Conditions to avoid:** Exposure to moisture

**10.5 Incompatible materials:** Avoid contact with oxidizing materials.

**10.6 Hazardous decomposition products:**  
Decomposition products can include and are not limited to: Formaldehyde. Methanol.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Information on likely routes of exposure

Inhalation, Eye contact, Skin contact, Ingestion.

**Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)**

#### Acute oral toxicity

##### Information for the Product:

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):  
LD50, > 5 000 mg/kg Estimated.

**Information for components:**

**Quartz**

Single dose oral LD50 has not been determined.

**Glycidoxypropyltrimethoxysilane**

LD50, Rat, male and female, 8 025 mg/kg OECD 401 or equivalent

This substance may hydrolyze to release Methanol. Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

**octamethylcyclotetrasiloxane [D4]**

LD50, Rat, male, > 4 800 mg/kg No deaths occurred at this concentration.

**Acute dermal toxicity**

**Information for the Product:**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):  
LD50, > 2 000 mg/kg Estimated.

**Information for components:**

**Quartz**

The dermal LD50 has not been determined.

**Glycidoxypropyltrimethoxysilane**

LD50, Rabbit, male, 4 250 mg/kg OECD 402 or equivalent

This substance may hydrolyze to release Methanol. Effects of methanol are the same as observed via oral and inhalation exposure and include central nervous system (CNS) depression, visual impairment up to blindness, metabolic acidosis, with effects on organ systems such as liver, kidneys and heart, even death.

**octamethylcyclotetrasiloxane [D4]**

LD50, Rat, male and female, > 2 400 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity**

**Information for the Product:**

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.

As product: The LC50 has not been determined.

**Information for components:**

**Quartz**

The LC50 has not been determined.

**Glycidoxypropyltrimethoxysilane**

LC50, Rat, 4 Hour, dust/mist, > 5,3 mg/l

This substance may hydrolyze to release Methanol. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death.

**octamethylcyclotetrasiloxane [D4]**

LC50, Rat, male and female, 4 Hour, dust/mist, 36 mg/l OECD Test Guideline 403

**Skin corrosion/irritation**

**Information for the Product:**

Based on information for component(s):  
Brief contact may cause slight skin irritation with local redness.  
May cause drying and flaking of the skin.

**Information for components:**

**Quartz**

May cause skin irritation due to mechanical abrasion.  
May cause drying and flaking of the skin.

**Glycidoxypropyltrimethoxysilane**

Brief contact may cause slight skin irritation with local redness.  
Prolonged contact may cause moderate skin irritation with local redness.

**octamethylcyclotetrasiloxane [D4]**

Brief contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**

**Information for the Product:**

Based on information for component(s):  
May cause moderate eye irritation.  
May cause corneal injury.

**Information for components:**

**Quartz**

Solid or dust may cause irritation or corneal injury due to mechanical action.

**Glycidoxypropyltrimethoxysilane**

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

**octamethylcyclotetrasiloxane [D4]**

Essentially nonirritating to eyes.

**Sensitization**

**Information for the Product:**

For skin sensitization:

Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Information for components:**

**Quartz**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Glycidoxypropyltrimethoxysilane**

Did not cause allergic skin reactions when tested in guinea pigs.

Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:

No relevant data found.

**octamethylcyclotetrasiloxane [D4]**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

**Information for the Product:**

Available data are inadequate to determine single exposure specific target organ toxicity.

**Information for components:**

**Quartz**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Glycidoxypropyltrimethoxysilane**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**octamethylcyclotetrasiloxane [D4]**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Aspiration Hazard**

**Information for the Product:**

Based on physical properties, not likely to be an aspiration hazard.

**Information for components:**

**Quartz**

Based on physical properties, not likely to be an aspiration hazard.

**Glycidoxypropyltrimethoxysilane**

Based on available information, aspiration hazard could not be determined.

**octamethylcyclotetrasiloxane [D4]**

May be harmful if swallowed and enters airways.

**Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)**

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

**Information for the Product:**

Contains a component(s) that is/are not expected to be bioavailable due to the physical state of the material under normal handling and processing conditions.

**Information for components:**

**Quartz**

In humans, effects have been reported on the following organs:

Kidney.

Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

**Glycidoxypropyltrimethoxysilane**

For similar material(s):

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**octamethylcyclotetrasiloxane [D4]**

In animals, effects have been reported on the following organs:

Kidney.

Liver.

Respiratory tract.

Female reproductive organs.

## Carcinogenicity

### Information for the Product:

Contains a component(s) that is/are not expected to be bioavailable due to the physical state of the material under normal handling and processing conditions.

### Information for components:

#### Quartz

Has caused cancer in humans. Has caused cancer in laboratory animals. Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

#### Glycidoxypropyltrimethoxysilane

Did not cause cancer in laboratory animals.

#### octamethylcyclotetrasiloxane [D4]

Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

## Teratogenicity

### Information for the Product:

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

### Information for components:

#### Quartz

For similar material(s): Did not cause birth defects or any other fetal effects in laboratory animals.

#### Glycidoxypropyltrimethoxysilane

Did not cause birth defects or any other fetal effects in laboratory animals.

#### octamethylcyclotetrasiloxane [D4]

Did not cause birth defects or any other fetal effects in laboratory animals.

## Reproductive toxicity

### Information for the Product:

No relevant data found.

### Information for components:

**Quartz**

No relevant data found.

**Glycidoxypropyltrimethoxysilane**

In animal studies, did not interfere with reproduction.

**octamethylcyclotetrasiloxane [D4]**

In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. In animal studies, has been shown to interfere with fertility.

**Mutagenicity**

**Information for the Product:**

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Based on information for component(s): Glycidoxypropyltrimethoxysilane was found to be genetically active in Ames reverse mutation assays, In Vitro sister chromatid exchange assays, and an In Vivo mouse micronucleus assay. This ingredient was not genetically active in an In Vivo cytogenetic assay (mice) or in an In Vivo sister chromatid exchange assay (rabbits, rats). The potential relevance of these data to humans is not known.

**Information for components:**

**Quartz**

In vitro genetic toxicity studies were negative in some cases and positive in other cases.

**Glycidoxypropyltrimethoxysilane**

Glycidoxypropyltrimethoxysilane was found to be genetically active in Ames reverse mutation assays, In Vitro sister chromatid exchange assays, and an In Vivo mouse micronucleus assay. This ingredient was not genetically active in an In Vivo cytogenetic assay (mice) or in an In Vivo sister chromatid exchange assay (rabbits, rats). The potential relevance of these data to humans is not known.

**octamethylcyclotetrasiloxane [D4]**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**11.2 Information on other hazards**

**Endocrine disrupting properties**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Information for components:**

**Quartz**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**Glycidoxypropyltrimethoxysilane**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**octamethylcyclotetrasiloxane [D4]**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

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## **SECTION 12: ECOLOGICAL INFORMATION**

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*Ecotoxicological information appears in this section when such data is available.*

### **12.1 Toxicity**

**Quartz**

**Acute toxicity to fish**

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

**Glycidoxypropyltrimethoxysilane**

**Acute toxicity to fish**

Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species).

LC50, Carp (Cyprinus carpio), semi-static test, 96 Hour, 55 mg/l, Directive 67/548/EEC, Annex V, C.1.

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), static test, 48 Hour, 324 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (algae), static test, 96 Hour, Growth rate, 350 mg/l, OECD Test Guideline 201 or Equivalent

NOEC, Pseudokirchneriella subcapitata (algae), static test, 96 Hour, Growth rate, 130 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, activated sludge, Static, 3 Hour, Respiration rates., > 100 mg/l, OECD 209 Test

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 100 mg/l

**octamethylcyclotetrasiloxane [D4]**

**Acute toxicity to fish**

Based on testing of comparable products: The estimated maximum aqueous concentration of Octamethyl Cyclotetrasiloxane (D4) from migration to water from the product as supplied is below the D4 established no-effect threshold (< 0.0079 mg/L) for aquatic organisms.

**Chronic toxicity to aquatic invertebrates**

Based on testing for product(s) in this family of materials:

Not classified due to data which are conclusive although insufficient for classification.

## 12.2 Persistence and degradability

### Quartz

**Biodegradability:** Biodegradation is not applicable.

### Glycidoxypropyltrimethoxysilane

**Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail

**Biodegradation:** 37 %

**Exposure time:** 28 d

**Method:** Regulation (EC) No. 440/2008, Annex, C.4-A

#### **Stability in Water (1/2-life)**

Hydrolysis, DT50, 6,5 Hour, pH 7, Half-life Temperature 24,5 °C, OECD Test Guideline 111

Hydrolysis, DT50, 0,15 Hour, pH 5, Half-life Temperature 24,5 °C, OECD Test Guideline 111

Hydrolysis, DT50, 0,002 Hour, pH 9, Half-life Temperature 24,5 °C, OECD Test Guideline 111

### octamethylcyclotetrasiloxane [D4]

**Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 3,7 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 310

#### **Stability in Water (1/2-life)**

Hydrolysis, DT50, 3,9 d, pH 7, Half-life Temperature 25 °C, OECD Test Guideline 111

## 12.3 Bioaccumulative potential

### Quartz

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

### Glycidoxypropyltrimethoxysilane

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 0,5 Estimated by Structure-Activity Relationship (SAR).

### octamethylcyclotetrasiloxane [D4]

**Bioaccumulation:** Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

**Partition coefficient: n-octanol/water(log Pow):** 6,49 Measured

**Bioconcentration factor (BCF):** 12 400 *Pimephales promelas* (fathead minnow) Measured

## 12.4 Mobility in soil

### Quartz

No relevant data found.

### Glycidoxypropyltrimethoxysilane

No relevant data found.

**octamethylcyclotetrasiloxane [D4]**

Partition coefficient (Koc): 16596 OECD Test Guideline 106

**12.5 Results of PBT and vPvB assessment**

**Quartz**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Glycidoxypropyltrimethoxysilane**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**octamethylcyclotetrasiloxane [D4]**

Octamethylcyclotetrasiloxane (D4) meets the current criteria for PBT and vPvB under REACH Annex XIII or other regionally specific criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms. Decamethylcyclopentasiloxane (D5) meets the current REACH Annex XIII criteria for vPvB. However, D5 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D5 is not biomagnifying in aquatic and terrestrial food webs. D5 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D5 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

This substance is considered to be persistent, bioaccumulating and toxic (PBT).

**12.6 Endocrine disrupting properties**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Quartz**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**Glycidoxypropyltrimethoxysilane**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**octamethylcyclotetrasiloxane [D4]**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

**12.7 Other adverse effects**

**Quartz**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Glycidoxypropyltrimethoxysilane**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**octamethylcyclotetrasiloxane [D4]**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

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## **SECTION 13: DISPOSAL CONSIDERATIONS**

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### **13.1 Waste treatment methods**

Do not dump into any sewers, on the ground, or into any body of water. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

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## **SECTION 14: TRANSPORT INFORMATION**

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### **Classification for ROAD and Rail transport (ADR/RID):**

- |  |   |
|--|---|
| <b>14.1 UN number or ID number</b>       | Not applicable  |
| <b>14.2 UN proper shipping name</b>      | Not regulated for transport                                       |
| <b>14.3 Transport hazard class(es)</b>   | Not applicable  |
| <b>14.4 Packing group</b>                | Not applicable  |
| <b>14.5 Environmental hazards</b>        | Not considered environmentally hazardous based on available data. |
| <b>14.6 Special precautions for user</b> | No data available.  |

### **Classification for INLAND waterways (ADNR/ADN):**

**Consult your Dow contact before transporting by inland waterway**

### **Classification for SEA transport (IMO-IMDG):**

- |   |   |
|---|---|
| <b>14.1 UN number or ID number</b>                                  | Not applicable  |
| <b>14.2 UN proper shipping name</b>                                 | Not regulated for transport                                 |
| <b>14.3 Transport hazard class(es)</b>                              | Not applicable  |
| <b>14.4 Packing group</b>   | Not applicable  |
| <b>14.5 Environmental hazards</b>                                   | Not considered as marine pollutant based on available data. |
| <b>14.6 Special precautions for user</b>                            | No data available.  |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b> | Consult IMO regulations before transporting ocean bulk      |

**Classification for AIR transport (IATA/ICAO):**

- 14.1 UN number or ID number Not applicable
- 14.2 UN proper shipping name Not regulated for transport
- 14.3 Transport hazard class(es) Not applicable
- 14.4 Packing group Not applicable
- 14.5 Environmental hazards Not applicable
- 14.6 Special precautions for user No data available.

**Further information:**

VENTED PACKAGES ARE FORBIDDEN FOR AIR TRANSPORT.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## SECTION 15: REGULATORY INFORMATION

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### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### REACH Regulation (EC) No 1907/2006

This product contains only components that have been either registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH)., The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

#### REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

Conditions of restriction for the following entries should be considered:  
Number on list 3  
octamethylcyclotetrasiloxane [D4] (Number on list 70)

#### Authorisation status under REACH:

The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

CAS-No.: 556-67-2	Name: octamethylcyclotetrasiloxane [D4]
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Authorisation status: listed in the Candidate List of Substances of Very High Concern for Authorisation

Authorisation number: Not available

Sunset date: Not available

Exempted (Categories of) Uses: Not available

**Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.**

Listed in Regulation: Not applicable

**Installations classified for the protection of the environment (Environment Code R511-9)**  
not determined

**Occupational Illnesses (R-461-3, France):** (Not applicable)

### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture.

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## SECTION 16: OTHER INFORMATION

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### Full text of H-Statements referred to under sections 2 and 3.

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008

Eye Irrit. - 2 - H319 - Calculation method

### Revision

Identification Number: 2768895 / A560 / Issue Date: 24.11.2021 / Version: 2.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

2006/15/EC	Europe. Indicative occupational exposure limit values
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
Dow IHG	Dow Industrial Hygiene Guideline
FR VLE	France. Occupational Exposure Limits (INRS)
STEL	Short-term exposure limit
TWA	Time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)
VLCT (VLE)	Short Term Exposure Limit
VME	Time Weighted Average

Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquids
Repr.	Reproductive toxicity
STOT RE	Specific target organ toxicity - repeated exposure

**Full text of other abbreviations**

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW FRANCE S.A.S. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to

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