



# SAFETY DATA SHEET

DOW CHEMICAL COMPANY LIMITED

Safety Data Sheet according to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

**Product name:** DOWSIL™ 1200 OS Primer Red

**Revision Date:** 10.11.2022

**Version:** 7.0

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DOW CHEMICAL COMPANY LIMITED 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:** DOWSIL™ 1200 OS Primer Red

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

**Identified uses:** Use at industrial sites: Use in coatings.

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

#### COMPANY IDENTIFICATION

DOW CHEMICAL COMPANY LIMITED  
5 OAKWATER AVENUE  
CHEADLE ROYAL BUSINESS PARK  
CHEADLE  
SK8 3SR  
UNITED KINGDOM

#### Customer Information Number:

+44 (0) 1663 746518

SDSQuestion@dow.com

#### Fax:

+44 (0) 1663 746605

### 1.4 EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 0031 115 694 982

**Local Emergency Contact:** 00 31 115 69 4982

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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, as retained and amended in UK law**

Flammable liquids - Category 3 - H226

Skin irritation - Category 2 - H315

Serious eye damage - Category 1 - H318

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, as retained and amended in UK law

### Hazard pictograms



Signal word: **DANGER**

### Hazard statements

H226 Flammable liquid and vapour.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.

### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.  
P303 + P361 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
+ P353  
P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER  
+ P338 +  
P310 and/or doctor.  
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

**Contains** Tetra n-Butyl titanate

### 2.3 Other hazards

Static-accumulating flammable liquid.

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.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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**Chemical nature:** Inorganic and organic compounds, Mixture

### 3.2 Mixtures

This product is a mixture.

CASRN / EC-No. / Index-No.	UK REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008, as retained and amended in UK law
<b>CASRN</b> 18765-38-3 <b>EC-No.</b> 242-560-0 <b>Index-No.</b> -	-	>= 1.0 - < 10.0 %	Tetrakis(2-butoxyethyl) orthosilicate	Skin Irrit. 2; H315 STOT RE 2; H373 (Blood)  Acute toxicity estimate Acute oral toxicity: > 2,000 mg/kg Acute dermal toxicity: > 2,000 mg/kg
<b>CASRN</b> 5593-70-4 <b>EC-No.</b> 227-006-8 <b>Index-No.</b> -	-	>= 3.0 - < 10.0 %	Tetra n-Butyl titanate	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336 (Central nervous system) STOT SE 3; H335 (Respiratory system)  Acute toxicity estimate Acute oral toxicity: 4,220 mg/kg Acute inhalation toxicity: 11 mg/l, 4 Hour, dust/mist Acute dermal toxicity: 5,300 mg/kg
<b>CASRN</b> 556-67-2 <b>EC-No.</b> 209-136-7 <b>Index-No.</b> 014-018-00-1	-	>= 0.0025 - < 0.025 %	octamethylcyclotetraasiloxane [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

Substances with a workplace exposure limit

<b>CASRN</b> 107-51-7 <b>EC-No.</b> 203-497-4 <b>Index-No.</b> —	UK-01- 4273948457-6	>= 80.0 - < 90.0 %	Octamethyltrisiloxane	Flam. Liq. 3; H226  Acute toxicity estimate Acute oral toxicity: > 2,000 mg/kg Acute inhalation toxicity: > 22.6 mg/l, 4 Hour, vapour Acute dermal toxicity: > 2,000 mg/kg
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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:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

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

Causes skin irritation. Causes serious eye damage.

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

**Notes to physician:** May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Repeated excessive exposure may aggravate preexisting lung disease.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

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

**Unsuitable extinguishing media:** High volume water jet. Do not use direct water stream..

## 5.2 Special hazards arising from the substance or mixture

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

**Unusual Fire and Explosion Hazards:** Flash back possible over considerable distance.. Exposure to combustion products may be a hazard to health.. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.. Flammable mixtures may exist within the vapor space of containers at room temperature.. Closed containers may rupture via pressure build-up when exposed to fire or extreme heat.. Fire burns more vigorously than would be expected.. Vapours may form explosive mixtures with air..

## 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 water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.. Do not use a solid water stream as it may scatter and spread fire..

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. 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:** Remove all sources of ignition. Use personal protective equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. 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:** Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. 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. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur.

**6.4 Reference to other sections:**

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

## SECTION 7: HANDLING AND STORAGE

**7.1 Precautions for safe handling:** Do not get on skin or clothing. Avoid inhalation of vapour or mist. Do not swallow. Do not get in eyes. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Non-sparking tools should be used. 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 with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

**7.2 Conditions for safe storage, including any incompatibilities:** Keep in properly labelled containers. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Flammable solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases. Unsuitable materials for containers: None known.

**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
octamethylcyclotetrasiloxane [D4]	US WEEL	TWA	10 ppm
Octamethyltrisiloxane	Dow IHG	TWA	20 ppm
Ethylene glycol monobutyl ether	ACGIH	TWA	20 ppm
	Further information: A3: Confirmed animal carcinogen with unknown relevance to humans		
	GB EH40	TWA	123 mg/m3 25 ppm
	Further information: Sk: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.		
	GB EH40	STEL	246 mg/m3 50 ppm
	Further information: Sk: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.		

propan-1-ol	ACGIH	TWA	100 ppm
	Further information: A4: Not classifiable as a human carcinogen		
	GB EH40	STEL	625 mg/m3 250 ppm
	Further information: Sk: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.		
	GB EH40	TWA	500 mg/m3 200 ppm
	Further information: Sk: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.		
1-Butanol	ACGIH	TWA	20 ppm
	GB EH40	STEL	154 mg/m3 50 ppm
	Further information: Sk: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.		

The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing: Ethylene glycol monobutyl ether, Propyl alcohol, butanol

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Ethylene glycol monobutyl ether	111-76-2	butoxyacetic acid	Urine	After shift	240 Millimoles per mole Creatinine	GB EH40 BAT
		Butoxyacetic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g Creatinine	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

Tetrakis(2-butoxyethyl) orthosilicate

#### Workers

Acute systemic effects		Acute local effects		Long-term systemic effects		Long-term local effects	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	25 mg/kg bw/day	44 mg/m3	n.a.	n.a.

#### Consumers

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	12.5 mg/kg bw/day	10.9 mg/m3	12.5 mg/kg bw/day	n.a.	n.a.

Tetra n-Butyl titanate

#### Workers

Acute systemic effects		Acute local effects		Long-term systemic effects		Long-term local effects	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	127 mg/m3	n.a.	n.a.

#### Consumers

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	37.5 mg/kg bw/day	152 mg/m3	3.75 mg/kg bw/day	n.a.	n.a.

octamethylcyclotetrasiloxane [D4]

#### Workers

Acute systemic effects		Acute local effects		Long-term systemic effects		Long-term local effects	
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

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
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

Octamethyltrisiloxane



**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
mg/kg bw/day	n.a.	n.a.	n.a.	1103 mg/kg bw/day	78 mg/m <sup>3</sup>	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
mg/kg bw/day	n.a.	mg/kg bw/day	n.a.	n.a.	556.5 mg/kg bw/day	19 mg/m <sup>3</sup>	0.04 mg/kg bw/day	n.a.	n.a.

**Predicted No Effect Concentration**

Tetrakis(2-butoxyethyl) orthosilicate

Compartment	PNEC
Fresh water	10 mg/l
Marine water	1 mg/l
Sewage treatment plant	463 mg/l
Fresh water sediment	63.6 mg/kg dry weight (d.w.)
Marine sediment	6.4 mg/kg dry weight (d.w.)
Soil	0.570 mg/kg dry weight (d.w.)

Tetra n-Butyl titanate

Compartment	PNEC
Fresh water	0.08 mg/l
Marine water	0.008 mg/l
Intermittent use/release	2.25 mg/l
Soil	0.017 mg/kg dry weight (d.w.)
Marine sediment	0.007 mg/kg
Sewage treatment plant	65 mg/l
Fresh water sediment	0.069 mg/kg

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

Octamethyltrisiloxane

Compartment	PNEC
Fresh water sediment	8.9 mg/kg dry weight (d.w.)
Marine sediment	0.89 mg/kg dry weight (d.w.)
Soil	1.7 mg/kg food
Sewage treatment plant	1 mg/l
Soil	0.5 mg/kg dry weight (d.w.)

## 8.2 Exposure controls

**Engineering controls:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. 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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2 (meeting standard EN 14387).

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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	red
Odor	slight
Odor Threshold	No data available
pH	Not applicable, substance/mixture is non-soluble (in water)
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	> 35 °C
Flash point	<b>closed cup</b> 27 °C
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	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)	0.82
Water solubility	insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic Viscosity	1 cSt at 25 °C
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

**9.2 Other information**

Molecular weight	No data available
Particle size	Not applicable

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. Vapours may form explosive mixture with air. Flammable liquid and vapour.

**10.4 Conditions to avoid:** Avoid static discharge. Heat, flames and sparks.

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

**10.6 Hazardous decomposition products:**

Decomposition products can include and are not limited to: Propyl alcohol. Ethylene glycol monobutyl ether. Butanol.

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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 toxicological effects

**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 Toxicity Endpoints:**

**Acute oral toxicity**

**Information for the Product:**

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

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

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

**Information for components:**

**Tetrakis(2-butoxyethyl) orthosilicate**

LD50, Rat, > 2,000 mg/kg

**Tetra n-Butyl titanate**

LD50, Rat, male, 4,220 mg/kg

**octamethylcyclotetrasiloxane [D4]**

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

**Octamethyltrisiloxane**

LD50, Rat, female, > 2,000 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:****Tetrakis(2-butoxyethyl) orthosilicate**

Information taken from reference works and the literature. LD50, Rat, > 2,000 mg/kg

**Tetra n-Butyl titanate**

LD50, Rabbit, 5,300 mg/kg

**octamethylcyclotetrasiloxane [D4]**

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

**Octamethyltrisiloxane**

LD50, Rat, male and female, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity****Information for the Product:**

No adverse effects are anticipated from single exposure to mist. Mist may cause irritation of upper respiratory tract (nose and throat) and lungs.

As product: The LC50 has not been determined.

**Information for components:****Tetrakis(2-butoxyethyl) orthosilicate**

Brief exposure (minutes) is not likely to cause adverse effects.

**Tetra n-Butyl titanate**

LC50, Rat, 4 Hour, dust/mist, 11 mg/l

**octamethylcyclotetrasiloxane [D4]**

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

**Octamethyltrisiloxane**

LC50, Rat, male and female, 4 Hour, vapour, > 22.6 mg/l No deaths occurred at this concentration.

**Skin corrosion/irritation**

Causes skin irritation.

**Information for the Product:**

Based on information for component(s):  
Brief contact may cause moderate skin irritation with local redness.

**Information for components:**

**Tetrakis(2-butoxyethyl) orthosilicate**

Brief contact may cause moderate skin irritation with local redness.

**Tetra n-Butyl titanate**

Prolonged contact may cause moderate skin irritation with local redness.

**octamethylcyclotetrasiloxane [D4]**

Brief contact is essentially nonirritating to skin.

**Octamethyltrisiloxane**

Brief contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Information for the Product:**

Based on information for component(s):  
May cause moderate eye irritation.  
May cause severe corneal injury.  
May cause permanent impairment of vision.

**Information for components:**

**Tetrakis(2-butoxyethyl) orthosilicate**

Essentially nonirritating to eyes.

**Tetra n-Butyl titanate**

May cause moderate eye irritation.  
May cause severe corneal injury.  
May cause permanent impairment of vision.

**octamethylcyclotetrasiloxane [D4]**

Essentially nonirritating to eyes.

**Octamethyltrisiloxane**

May cause slight temporary eye irritation.  
Corneal injury is unlikely.

**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:**

**Tetrakis(2-butoxyethyl) orthosilicate**

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

No relevant data found.

**Tetra n-Butyl titanate**

Did not demonstrate the potential for contact allergy in mice.

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.

**Octamethyltrisiloxane**

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:**

Product test data not available.

**Information for components:**

**Tetrakis(2-butoxyethyl) orthosilicate**

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

**Tetra n-Butyl titanate**

May cause respiratory irritation.  
Route of Exposure: Inhalation  
Target Organs: Respiratory Tract  
May cause drowsiness or dizziness.  
Route of Exposure: Inhalation  
Target Organs: Nervous system

**octamethylcyclotetrasiloxane [D4]**

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

**Octamethyltrisiloxane**

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

**Aspiration Hazard**

**Information for the Product:**

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

**Information for components:**

**Tetrakis(2-butoxyethyl) orthosilicate**

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

**Tetra n-Butyl titanate**

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

**octamethylcyclotetrasiloxane [D4]**

May be harmful if swallowed and enters airways.

**Octamethyltrisiloxane**

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

**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:**

Product test data not available.

**Information for components:**

**Tetrakis(2-butoxyethyl) orthosilicate**

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

**Tetra n-Butyl titanate**

No relevant data found.

**octamethylcyclotetrasiloxane [D4]**

In animals, effects have been reported on the following organs:  
Kidney.  
Liver.  
Respiratory tract.  
Female reproductive organs.

**Octamethyltrisiloxane**

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



This material contains octamethyltrisiloxane (L3). Repeated inhalation exposure in rats to L3 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.

## Carcinogenicity

### Information for the Product:

Product test data not available.

### Information for components:

#### Tetrakis(2-butoxyethyl) orthosilicate

No relevant data found.

#### Tetra n-Butyl titanate

No relevant data found.

#### 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.

#### Octamethyltrisiloxane

Did not cause cancer in laboratory animals.

## Teratogenicity

### Information for the Product:

Product test data not available.

### Information for components:

#### Tetrakis(2-butoxyethyl) orthosilicate

Did not cause birth defects in laboratory animals.

#### Tetra n-Butyl titanate

No relevant data found.

#### octamethylcyclotetrasiloxane [D4]

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

#### Octamethyltrisiloxane

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

## Reproductive toxicity

### Information for the Product:

Product test data not available.

### Information for components:

#### Tetrakis(2-butoxyethyl) orthosilicate

In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring.

#### Tetra n-Butyl titanate

No relevant data found.

#### 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.

#### Octamethyltrisiloxane

In animal studies, did not interfere with fertility. In animal studies, did not interfere with reproduction.

## Mutagenicity

### Information for the Product:

Product test data not available.

### Information for components:

#### Tetrakis(2-butoxyethyl) orthosilicate

No relevant data found.

#### Tetra n-Butyl titanate

No relevant data found.

#### octamethylcyclotetrasiloxane [D4]

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

#### Octamethyltrisiloxane

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

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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

**Tetrakis(2-butoxyethyl) orthosilicate****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).

LC50, Danio rerio (zebra fish), 96 Hour, > 201 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

EC50, Daphnia sp. (water flea), 48 Hour, > 90 mg/l, EG 84/449

**Acute toxicity to algae/aquatic plants**

ErC50, Scenedesmus subspicatus, 72 Hour, > 161 mg/l, 88/302/EC

**Tetra n-Butyl titanate****Acute toxicity to fish**

No relevant data found.

**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.

**Octamethyltrisiloxane****Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

No toxicity at the limit of solubility

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, > 0.0191 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 0.02 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

No toxicity at the limit of solubility

EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, > 0.0094 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

For similar material(s):

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

**Chronic toxicity to fish**

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), 90 d, > 0.027 mg/l

**Chronic toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

NOEC, Daphnia magna (Water flea), flow-through test, 21 d, &gt; 0.015 mg/l

**12.2 Persistence and degradability****Tetrakis(2-butoxyethyl) orthosilicate****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 83 %**Method:** OECD Test Guideline 301B**Tetra n-Butyl titanate****Biodegradability:** No relevant data found.**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

**Octamethyltrisiloxane****Biodegradability:** Biodegradation under aerobic laboratory conditions is below detectable limits (BOD20 or BOD28/ThOD < 2.5%).

10-day Window: Not applicable

**Biodegradation:** 0 %**Exposure time:** 28 d**Method:** OECD Test Guideline 310 or Equivalent**12.3 Bioaccumulative potential****Tetrakis(2-butoxyethyl) orthosilicate****Bioaccumulation:** No relevant data found.**Tetra n-Butyl titanate****Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient: n-octanol/water(log Pow):** 0.88 Estimated.**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**Octamethyltrisiloxane**

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

**Partition coefficient: n-octanol/water(log Pow):** 5.35 Estimated.

**Bioconcentration factor (BCF):** >= 500 Pimephales promelas (fathead minnow) OECD Test Guideline 305

## 12.4 Mobility in soil

### Tetrakis(2-butoxyethyl) orthosilicate

No relevant data found.

### Tetra n-Butyl titanate

No relevant data found.

### octamethylcyclotetrasiloxane [D4]

**Partition coefficient (Koc):** 16596 OECD Test Guideline 106

### Octamethyltrisiloxane

**Partition coefficient (Koc):** 3179 Estimated.

## 12.5 Results of PBT and vPvB assessment

### Tetrakis(2-butoxyethyl) orthosilicate

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

### Tetra n-Butyl titanate

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

### 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.

### Octamethyltrisiloxane

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).

## 12.6 Other adverse effects

### Tetrakis(2-butoxyethyl) orthosilicate

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

### Tetra n-Butyl titanate

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.

### Octamethyltrisiloxane

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):

- |                                   |   |
|-----------------------------------|---|
| 14.1 UN number or ID number       | UN 1993   |
| 14.2 UN proper shipping name      | FLAMMABLE LIQUID, N.O.S.(Octamethyltrisiloxane, Organo titanate)  |
| 14.3 Transport hazard class(es)   | 3   |
| 14.4 Packing group                | III   |
| 14.5 Environmental hazards        | Not considered environmentally hazardous based on available data. |
| 14.6 Special precautions for user | Hazard Identification Number: 30                                  |

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

Consult your Dow contact before transporting by inland waterway

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

- |  |  |
|--|--|
| 14.1 UN number or ID number                                  | UN 1993  |
| 14.2 UN proper shipping name                                 | FLAMMABLE LIQUID, N.O.S.(Octamethyltrisiloxane, Organo titanate) |
| 14.3 Transport hazard class(es)                              | 3  |
| 14.4 Packing group   | III  |
| 14.5 Environmental hazards                                   | Not considered as marine pollutant based on available data.      |
| 14.6 Special precautions for user                            | EmS: F-E, S-E  |
| 14.7 Maritime transport in bulk according to IMO instruments | Consult IMO regulations before transporting ocean bulk           |

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

<b>14.1 UN number or ID number</b>	UN 1993
<b>14.2 UN proper shipping name</b>	Flammable liquid, n.o.s.(Octamethyltrisiloxane, Organo titanate)
<b>14.3 Transport hazard class(es)</b>	3
<b>14.4 Packing group</b>	III
<b>14.5 Environmental hazards</b>	Not applicable
<b>14.6 Special precautions for user</b>	No data available.

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

#### UK REACH - UK Statutory Instruments 2019 No.758 as amended

This product contains only components that have been either registered, notified for downstream user import (DUIN), are exempt from registration, are regarded as registered or are not subject to registration according to UK Statutory Instruments 2019 No.758 as amended (UK REACH)., The aforementioned indications of the UK REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed 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.

#### UK REACH List of restrictions (Annex 17)

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

**Control of Major Accident Hazards Regulations 2015 (COMAH)**

Listed in Regulation: FLAMMABLE LIQUIDS

Number in Regulation: P5c

5,000 t

50,000 t

**15.2 Chemical safety assessment**

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

**SECTION 16: OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

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

Flam. Liq. - 3 - H226 - Based on product data or assessment

Skin Irrit. - 2 - H315 - Calculation method

Eye Dam. - 1 - H318 - Calculation method

**Revision**

Identification Number: 4001581 / A279 / Issue Date: 10.11.2022 / Version: 7.0

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

**Legend**

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
Dow IHG	Dow Industrial Hygiene Guideline
GB EH40	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT	UK. Biological monitoring guidance values
STEL	Short-term exposure limit (15-minute reference period)
TWA	Time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquids
Repr.	Reproductive toxicity
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure



STOT SE	Specific target organ toxicity - single exposure
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**Full text of other abbreviations**

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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 CHEMICAL COMPANY LIMITED 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 the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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