



SAFETY DATA SHEET

SPECIALTY ELECTRONIC MATERIALS UK LIMITED

Safety Data Sheet according to Regulation (EC) No 1907/2006 - Annex II

Product name: MOLYKOTE® 3179 Dilatant Compound

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SPECIALTY ELECTRONIC MATERIALS UK 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.

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

1.1 Product identifier

Product name: MOLYKOTE® 3179 Dilatant Compound

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

Identified uses: Lubricants and lubricant additives

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

SPECIALTY ELECTRONIC MATERIALS UK
LIMITED
KINGS COURT, LONDON ROAD
STEVENAGE
England
SG1 2NG
UNITED KINGDOM

Customer Information Number:

00800-3876-6838

SDSQuestion-EU@dupont.com

1.4 EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: +(44)-870-8200418

Local Emergency Contact: +(44)-870-8200418

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Carcinogenicity - Category 1A - H350

Specific target organ toxicity - repeated exposure - Category 1 - Inhalation - H372

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: **DANGER**

Hazard statements

H350 May cause cancer.

H372 Causes damage to organs (Lungs) through prolonged or repeated exposure if inhaled.

Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe mist or vapours.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental information

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

The following percentage of the mixture consists of ingredient(s) with unknown acute dermal toxicity: 1.4 %

The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 1.5 %

Contains Quartz

2.3 Other hazards

Endocrine disrupting properties (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.

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.

PBT and vPvB assessment:

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

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.

This product contains dodecamethylcyclohexasiloxane (D6) that has been identified by the Member State Committee of ECHA as fulfilling the vPvB criteria laid down in Annex XIII to Regulation (EC) No 1907/2006. See Section 12 for additional information.

This product contains decamethylcyclopentasiloxane (D5) that has been identified by the Member State Committee of ECHA as fulfilling the vPvB criteria laid down in Annex XIII to Regulation (EC) No 1907/2006. See Section 12 for additional information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Silicone compound

3.2 Mixtures

This product is a mixture.

Identification number	Component	Classification according to Regulation (EU) 1272/2008 (CLP)	specific concentration limit/ M-Factors/ Acute toxicity estimate	%
CASRN 14808-60-7 EC-No. 238-878-4 Index-No. — REACH No —	Quartz	Carc. 1A - H350 STOT RE 1 - H372	Oral ATE: > 11,000 mg/kg	>= 10.0 - < 20.0 %
CASRN 13463-67-7 EC-No. 236-675-5 Index-No. 022-006-00-2 REACH No 01-2119489379-17	titanium dioxide	Carc. 2 - H351	Oral ATE: > 5,000 mg/kg Inhalation ATE: > 5.09 mg/l (dust/mist)	>= 1.0 - < 10.0 %
CASRN 556-67-2 EC-No. 209-136-7 Index-No. 014-018-00-1 REACH No —	octamethylcyclotetrasiloxane	Flam. Liq. 3 - H226 Repr. 2 - H361f Aquatic Chronic 1 - H410	M-Factor: 10[Chronic] Oral ATE: > 4,800 mg/kg Inhalation ATE: 36 mg/l (dust/mist) Dermal ATE: > 2,375 mg/kg	>= 1.0 - < 3.0 %

PBT and vPvB substance

Identification number	Component	Classification according to Regulation (EU) 1272/2008 (CLP)	Specific Concentration Limits/ M-Factors/ Acute Toxicity Estimate	%
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CASRN 540-97-6 EC-No. 208-762-8 Index-No. – REACH No –	Dodecamethyl cyclohexasiloxane	Not classified	Oral ATE: > 2,000 mg/kg Dermal ATE: > 2,000 mg/kg	>= 1.0 - < 10.0 %
CASRN 541-02-6 EC-No. 208-764-9 Index-No. – REACH No –	Decamethylcyclopentasiloxane	Not classified	Oral ATE: > 24,134 mg/kg Inhalation ATE: 8.67 mg/l (dust/mist) Dermal ATE: > 2,000 mg/kg	>= 1.0 - < 10.0 %

Substances with a workplace exposure limit

Identification number	Component	Classification according to Regulation (EU) 1272/2008 (CLP)	Specific Concentration Limits/ M-Factors/ Acute Toxicity Estimate	%
CASRN 56-81-5 EC-No. 200-289-5 Index-No. – REACH No –	Glycerol	Not classified	Oral ATE: > 11,500 mg/kg Inhalation ATE: > 2.75 mg/l (dust/mist) Dermal ATE: >= 56,750 mg/kg	>= 1.0 - < 10.0 %

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; if effects occur, consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

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:

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.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water spray Alcohol-resistant foam Carbon dioxide (CO₂) Dry chemical

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Silicon oxides Boron oxides Formaldehyde Carbon oxides

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health. Fire burns more vigorously than would be expected.

5.3 Advice for firefighters

Fire Fighting Procedures: 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. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Remove all sources of ignition. 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 absorbent. 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, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. 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: Avoid inhalation of vapour or mist. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.

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

Advice on general occupational hygiene

Handle in accordance with good industrial hygiene and safety practice. Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

7.2 Conditions for safe storage, including any incompatibilities: Keep in properly labelled containers. Store locked up. Store in accordance with the particular national regulations.

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

Unsuitable materials for containers: None known.

7.3 Specific end use(s): Information on specific end use(s) of this product may be provided in a technical data sheet/annex to the SDS (if available).

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	US WEEL	TWA	10 ppm
Decamethylcyclopentasiloxane	US WEEL	TWA	10 ppm
Glycerol	GB EH40	TWA Mist	10 mg/m3
Further information: 2: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used			

Derived No Effect Level

titanium dioxide

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.	n.a.	n.a.	10 mg/m3
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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.	n.a.	700 mg/kg bw/day	n.a.	n.a.

Dodecamethyl cyclohexasiloxane

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.	6.1 mg/m3	n.a.	11 mg/m3	n.a.	1.22 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.	1.7 mg/kg bw/day	n.a.	1.5 mg/m3	n.a.	2.7 mg/m3	1.7 mg/kg bw/day	n.a.	0.3 mg/m3

Decamethylcyclopentasiloxane

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.	97.3 mg/m3		n.a.	24.2 mg/m3	n.a.	97.3 mg/m3	n.a.	24.2 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.	17.3 mg/m3	5 mg/kg bw/day	n.a.	4.3 mg/m3	n.a.	17.3 mg/m3	5 mg/kg bw/day	n.a.	4.3 mg/m3

Glycerol

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.	n.a.	n.a.	56 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.	n.a.	229 mg/kg bw/day	n.a.	33 mg/m3
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Predicted No Effect Concentration

titanium dioxide

Compartment	PNEC
Fresh water	0.184 mg/l
Marine water	0.0184 mg/l
Intermittent use/release	0.193 mg/l
Sewage treatment plant	100 mg/l
Fresh water sediment	1000 mg/kg
Marine sediment	100 mg/kg
Soil	100 mg/kg

Dodecamethyl cyclohexasiloxane

Compartment	PNEC
Fresh water sediment	2.826 mg/kg
Marine sediment	0.282 mg/kg
Soil	3.336 mg/kg
Sewage treatment plant	> 1.0 mg/l

Decamethylcyclopentasiloxane

Compartment	PNEC
Fresh water	> 0.0012 mg/l
Marine water	> 0.00012 mg/l
Fresh water sediment	2.4 mg/kg
Marine sediment	0.24 mg/kg
Soil	1.1 mg/kg
Sewage treatment plant	> 10 mg/l

Glycerol

Compartment	PNEC
Fresh water	0.885 mg/l
Marine water	0.0885 mg/l
Intermittent use/release	8.85 mg/l
Sewage treatment plant	1000 mg/l
Fresh water sediment	3.3 mg/kg
Marine sediment	0.33 mg/kg
Soil	0.141 mg/kg

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.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). Safety glasses (with side shields) 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. 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.

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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	liquid (20 °C,)
	Form viscous liquid
Colour	pink
Odour	none
	Odour Threshold No data available
Melting point/freezing point	Melting point/range: No data available
Boiling point or initial boiling point and boiling range	Boiling point/boiling range: > 100 °C
Flammability	Not applicable
	Ignitable (see flash point)
Lower explosion limit and upper explosion limit / flammability limit	Lower explosion limit / Lower flammability limit No data available
	Upper explosion limit / Upper flammability limit

	No data available
Flash point	> 93.8 °C Method: (closed cup)
Auto-ignition temperature	No data available
Decomposition temperature	Thermal decomposition No data available
pH	No data available
Viscosity	Viscosity, kinematic 10 m ² /s (25 °C)
Solubility(ies)	Water solubility No data available
Partition coefficient: n-octanol/water	No data available
Vapour pressure	No data available
Density and / or relative density	Relative density 1.14
Relative vapour density	No data available
Particle characteristics	Particle size Not applicable

9.2 Other information

Oxidizing properties	The substance or mixture is not classified as oxidizing.
Self-heating substances	The substance or mixture is not classified as self heating.
Substances and mixtures, which in contact with water, emit flammable gases	The substance or mixture does not emit flammable gases in contact with water.
Corrosive to metals	Not corrosive to metals
Evaporation rate	No data available
Molecular weight	No data available

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

SECTION 10: STABILITY AND REACTIVITY

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.

10.4 Conditions to avoid: None known.

10.5 Incompatible materials: Oxidizing agents

10.6 Hazardous decomposition products: Formaldehyde.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity

Acute toxicity (Acute oral toxicity)

Not classified

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

Product test data not available. Refer to component data.

Acute toxicity (Acute dermal toxicity)

Not classified

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

Product test data not available. Refer to component data.

Acute toxicity (Acute inhalation toxicity)

Not classified

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

Product test data not available. Refer to component data.

Skin corrosion/irritation

Not classified

Not classified due to lack of data. / Not classified due to data which are conclusive although insufficient for

classification.

Product test data not available. Refer to component data.

Serious eye damage/eye irritation

Not classified

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

Product test data not available. Refer to component data.

Respiratory or skin sensitisation

Not classified

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

Product test data not available. Refer to component data.

Germ cell mutagenicity

Not classified

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

Product test data not available. Refer to component data.

Carcinogenicity

Carcinogenicity, Category 1A

H350: May cause cancer.

Classification procedure: Calculation method

Product test data not available. Refer to component data.

Reproductive toxicity

Not classified

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

Toxicity to reproduction assessment :

Product test data not available. Refer to component data.

Assessment Teratogenicity:

Product test data not available. Refer to component data.

STOT - single exposure

Not classified

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

Product test data not available. Refer to component data.

STOT - repeated exposure

Specific target organ toxicity - repeated exposure, Category 1

H372: Causes damage to organs through prolonged or repeated exposure if inhaled.

Classification procedure: Calculation method

Product test data not available. Refer to component data.

Aspiration Hazard

Not classified

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

Product test data not available. Refer to component data.

COMPONENTS INFLUENCING TOXICOLOGY:

Quartz

Acute toxicity (Acute oral toxicity)

LD50, Rat, > 11,000 mg/kg

Acute toxicity (Acute dermal toxicity)

The dermal LD50 has not been determined.

Acute toxicity (Acute inhalation toxicity)

Vapors are unlikely due to physical properties. Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs. Excessive exposure may cause lung injury.

The LC50 has not been determined.

Skin corrosion/irritation

May cause skin irritation due to mechanical abrasion.

May cause drying and flaking of the skin.

Serious eye damage/eye irritation

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

Respiratory or skin sensitisation

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

For respiratory sensitization:

No relevant data found.

Germ cell mutagenicity

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

Carcinogenicity

Has caused cancer in humans. Has caused cancer in laboratory animals.

Reproductive toxicity

Toxicity to reproduction assessment :

No relevant data found.

Assessment Teratogenicity:

No relevant data found.

STOT - single exposure

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

STOT - repeated exposure

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

Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Aspiration Hazard

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

titanium dioxide

Acute toxicity (Acute oral toxicity)

LD50, Rat, > 5,000 mg/kg OECD Test Guideline 401

Acute toxicity (Acute inhalation toxicity)

LC50, Rat, 4 Hour, dust/mist, > 5.09 mg/l OECD Test Guideline 403

Skin corrosion/irritation

No skin irritation

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Respiratory or skin sensitisation

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

Did not cause allergic respiratory reaction in animal tests.

Germ cell mutagenicity

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

Carcinogenicity

Has caused cancer in some laboratory animals. However, the relevance of this to humans is unknown. Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Reproductive toxicity

Toxicity to reproduction assessment :

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

Assessment Teratogenicity:

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

STOT - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

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

Aspiration Hazard

No aspiration toxicity classification

octamethylcyclotetrasiloxane

Acute toxicity (Acute oral toxicity)

LD50, Rat, > 4,800 mg/kg OECD Test Guideline 401

Acute toxicity (Acute dermal toxicity)

LD50, Rabbit, > 2,375 mg/kg OECD Test Guideline 402

Acute toxicity (Acute inhalation toxicity)

LC50, Rat, 4 Hour, dust/mist, 36 mg/l

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Respiratory or skin sensitisation

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

Germ cell mutagenicity

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

Carcinogenicity

Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Toxicity to reproduction assessment :

In animal studies, has been shown to interfere with fertility.

Assessment Teratogenicity:

Did not cause birth defects in laboratory animals.

STOT - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

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

Aspiration Hazard

May be harmful if swallowed and enters airways.

Dodecamethyl cyclohexasiloxane

Acute toxicity (Acute oral toxicity)

LD50, Rat, > 2,000 mg/kg OECD Test Guideline 423

Acute toxicity (Acute dermal toxicity)

LD50, Rat, > 2,000 mg/kg OECD Test Guideline 402

Acute toxicity (Acute inhalation toxicity)

The LC50 has not been determined.

Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Respiratory or skin sensitisation

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

Germ cell mutagenicity

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

Reproductive toxicity

Toxicity to reproduction assessment :

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

Assessment Teratogenicity:

Did not cause birth defects in laboratory animals.

STOT - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

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

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

Decamethylcyclopentasiloxane

Acute toxicity (Acute oral toxicity)

LD50, Rat, male and female, > 24,134 mg/kg

Acute toxicity (Acute dermal toxicity)

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

Acute toxicity (Acute inhalation toxicity)

LC50, Rat, male and female, 4 Hour, dust/mist, 8.67 mg/l

Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

Essentially nonirritating to eyes.

Respiratory or skin sensitisation

Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

Germ cell mutagenicity

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

Carcinogenicity

Results from a 2 year repeated vapour inhalation exposure study to rats of decamethylcyclopentasiloxane (D5) indicate effects (uterine endometrial tumors) in female animals. This finding occurred at the highest exposure dose (160 ppm) only. Studies to date have not demonstrated if this effect occurs through a pathway that is relevant to humans.

Reproductive toxicity

Toxicity to reproduction assessment :

In animal studies, did not interfere with reproduction.

Assessment Teratogenicity:

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

STOT - single exposure

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

STOT - repeated exposure

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

Aspiration Hazard

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

Glycerol**Acute toxicity (Acute oral toxicity)**

Excessive exposure may cause: Central nervous system effects. Observations in humans include: Altered blood sugar levels. LD50, Rat, > 11,500 mg/kg

Acute toxicity (Acute dermal toxicity)

LD50, Guinea pig, >= 56,750 mg/kg

Acute toxicity (Acute inhalation toxicity)

LC50, Rat, 4 Hour, dust/mist, > 2.75 mg/l No deaths occurred following exposure to a saturated atmosphere.

Skin corrosion/irritation

Prolonged exposure not likely to cause significant skin irritation.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Corneal injury is unlikely.

Respiratory or skin sensitisation

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

Germ cell mutagenicity

In vitro genetic toxicity studies were negative.

Carcinogenicity

For the major component(s): Did not cause cancer in laboratory animals.

Reproductive toxicity

Toxicity to reproduction assessment :

Reproductive effects seen in female animals are believed to be due to altered nutritional states resulting from extremely high doses of glycerine given in the diet. Similar effects have been seen in animals fed synthetic diets.

Assessment Teratogenicity:

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

STOT - single exposure

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

STOT - repeated exposure

Excessive exposure to glycerine may cause increased fat levels in blood.

Aspiration Hazard

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

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.

Further information

No data available

SECTION 12: ECOLOGICAL INFORMATION

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).

titanium dioxide**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

NOEC, Lemna minor (duckweed), 7 d, 100 mg/l, OECD Test Guideline 221

Toxicity to bacteria

EC50, 3 Hour, > 1,000 mg/l, OECD Test Guideline 209

Chronic toxicity to fish

NOEC, Danio rerio (zebra fish), 6 d, 160 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, 5 mg/l

octamethylcyclotetrasiloxane

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), 96 Hour, > 0.022 mg/l

Acute toxicity to aquatic invertebrates

No toxicity at the limit of solubility

EC50, Daphnia magna (Water flea), 48 Hour, > 0.015 mg/l

Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility

EC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, > 0.022 mg/l

EC10, Pseudokirchneriella subcapitata (green algae), 96 Hour, > 0.022 mg/l

Chronic toxicity to fish

Test data on this mixture/similar tested mixtures show that octamethylcyclotetrasiloxane does not partition from the matrix of this product and is not bioavailable for organisms in the aquatic environment above the 21day-No Observed Effect Concentration.

Octamethylcyclotetrasiloxane therefore does not contribute to the classification for aquatic toxicity of this product.

NOEC, Oncorhynchus mykiss (rainbow trout), 93 d, 0.0044 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, 0.015 mg/l

Dodecamethyl cyclohexasiloxane

Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 0.002 mg/l, OECD Test Guideline 201

Chronic toxicity to fish

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), 90 d, > 0.014 mg/l

Chronic toxicity to aquatic invertebrates

No toxicity at the limit of solubility

NOEC, Daphnia magna (Water flea), 21 d, > 0.0046 mg/l

Decamethylcyclopentasiloxane**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), 96 Hour, > 16 µg/l, OECD Test Guideline 204 or Equivalent

Acute toxicity to aquatic invertebrates

No toxicity at the limit of solubility

EC50, Daphnia magna, 48 Hour, > 2.9 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility

ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, > 0.012 mg/l

No toxicity at the limit of solubility

NOEC, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, 0.012 mg/l

Chronic toxicity to fish

No toxicity at the limit of solubility

LC50, Oncorhynchus mykiss (rainbow trout), 14 d, > 16 mg/l

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), 45 d, >= 0.017 mg/l

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), 90 d, >= 0.014 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna, 21 d, 0.015 mg/l

Toxicity to soil-dwelling organisms

This product does not have any known adverse effect on the soil organisms tested.

NOEC, Eisenia fetida (earthworms), >= 76 mg/kg

Glycerol**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, Pimephales promelas (fathead minnow), static test, 96 Hour, >= 885 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates

LC50, Daphnia magna (Water flea), static test, 48 Hour, 1,955 mg/l, Method Not Specified.

Acute toxicity to algae/aquatic plants

EC50, Other, static test, 192 Hour, Growth inhibition (cell density reduction), 2,900 mg/l, Method Not Specified.

Toxicity to bacteria

EC50, activated sludge, 3 Hour, > 1,000 mg/l, OECD 209 Test

12.2 Persistence and degradability**Quartz**

Biodegradability: Biodegradation is not applicable.

octamethylcyclotetrasiloxane

Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: 3.7 %

Exposure time: 29 d

Method: OECD Test Guideline 310

Dodecamethyl cyclohexasiloxane

Biodegradability: Not readily biodegradable.

Method: OECD Test Guideline 310

Biodegradation: 4.47 %

Exposure time: 28 d

Decamethylcyclopentasiloxane

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: 0.14 %

Exposure time: 28 d

Method: OECD Test Guideline 310

Glycerol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Not applicable

Biodegradation: 63 %

Exposure time: 14 d

Method: OECD Test Guideline 301C or Equivalent

12.3 Bioaccumulative potential

Quartz

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

titanium dioxide

Bioaccumulation: Bioaccumulation is unlikely.

octamethylcyclotetrasiloxane

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

Partition coefficient: n-octanol/water(log Pow): 6.98 at 21.7 °C

Dodecamethyl cyclohexasiloxane

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 8.87 at 23.6 °C

Decamethylcyclopentasiloxane

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 5.2 Measured

Bioconcentration factor (BCF): 2,010 Fish Estimated.

Glycerol

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

Partition coefficient: n-octanol/water(log Pow): -1.76 at 20 °C Measured

12.4 Mobility in soil

Quartz

No relevant data found.

octamethylcyclotetrasiloxane

Expected to be relatively immobile in soil (Koc > 5000).

Dodecamethyl cyclohexasiloxane

Potential for mobility in soil is very high (Koc between 0 and 50).

Decamethylcyclopentasiloxane

Expected to be relatively immobile in soil (Koc > 5000).

Partition coefficient (Koc): > 5000 Estimated.

Glycerol

Potential for mobility in soil is very high (Koc between 0 and 50).

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient (Koc): 1 Estimated.

12.5 Results of PBT and vPvB assessment

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

Quartz

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

titanium dioxide

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

octamethylcyclotetrasiloxane

Octamethylcyclotetrasiloxane (D4) meets the current REACH Annex XIII criteria for PBT and vPvB. In Canada, D4 has been assessed and deemed to meet the PtT 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.

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

This substance is considered to be very persistent and very bioaccumulating (vPvB).

Dodecamethyl cyclohexasiloxane

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

This substance is considered to be very persistent and very bioaccumulating (vPvB).

Decamethylcyclopentasiloxane

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. Based on an independent scientific panel of experts, the Canadian Minister of the Environment has concluded that "D5 is not entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity, or that constitute or may constitute a danger to the environment on which life depends".

Glycerol

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is readily biodegradable and thus is not considered persistent or very persistent (P or vP).

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.

12.7 Other adverse effects

Quartz

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

titanium dioxide

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

octamethylcyclotetrasiloxane

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

Dodecamethyl cyclohexasiloxane

No relevant data found.

Decamethylcyclopentasiloxane

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

Glycerol

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

SECTION 13: DISPOSAL CONSIDERATIONS

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.

SECTION 14: TRANSPORT INFORMATION

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

- | | | |
|------|------------------------------|---|
| 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 considered environmentally hazardous based on available data. |
| 14.6 | Special precautions for user | No data available. |

Classification for SEA transport (IMO-IMDG):

- | | | |
|------|---|---|
| 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 considered as marine pollutant based on available data. |
| 14.6 | Special precautions for user | No data available. |
| 14.7 | Maritime transport in bulk according to IMO instruments | 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. |

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.

SECTION 15: REGULATORY INFORMATION

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.

Restrictions on the manufacture, placing on the market and use:

The following substance/s contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product have to comply with the restrictions placed upon it by the aforementioned provision.

CAS-No.: 556-67-2	Name: octamethylcyclotetrasiloxane
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Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) no 1907/2006 for Conditions of restriction
Number on the list: 70

CAS-No.: 541-02-6	Name: Decamethylcyclopentasiloxane
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Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) no 1907/2006 for Conditions of restriction
Number on the 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
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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

CAS-No.: 540-97-6	Name: Dodecamethyl cyclohexasiloxane
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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

CAS-No.: 541-02-6	Name: Decamethylcyclopentasiloxane
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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

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.
H350	May cause cancer.
H351	Suspected of causing cancer if inhaled.
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.

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

Carc. - 1A - H350 - Calculation method

STOT RE - 1 - H372 - Calculation method

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

Legend

GB EH40	UK. EH40 WEL - Workplace Exposure Limits
TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)
Aquatic Chronic	Long-term (chronic) aquatic hazard
Carc.	Carcinogenicity
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 - 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.

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GB