

Material Safety Data Sheet Regulation EC No 1907/2006 Art.31

Product Name: Regin High Temperature Silicone Sealant - White

Product Code: REGZ35

Last Reviewed: September 2021 **Next Review Due:** September 2026

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Product name: REGZ35 Regin High Temperature Silicone Sealant - White
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REGIN PRODUCTS 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: REGZ35 Regin High Temperature Silicone Sealant - White

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

Identified uses: Adhesive, binding agents

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

REGIN PRODUCTS LTD

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UNITED KINGDOM

Customer Information Number:

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1.4 EMERGENCY TELEPHONE NUMBER

Local Emergency Contact: 00 44 (0)1480 412415 (office hours only)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

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

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Precautionary statements

P271 Use only outdoors or in a well-ventilated area.

Supplemental information

EUH210 Safety data sheet available on request.

EUH208 Contains: Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane. May produce an allergic reaction.

EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

2.3 Other hazards

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.

Endocrine disrupting properties

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

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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Silicone elastomer

3.2 Mixtures

This product is a mixture.

CASRN / EC-No. /Index-No.	REACH Reg. Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 13463-67-7 EC-No. 236-675-5 Index-No. -	01-2119489379-17	<= 1.89 %	titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	Carc. 2; H351 Acute toxicity estimate Acute oral toxicity: > 10,000 mg/kg Acute inhalation toxicity: > 6.82 mg/l, 4 Hour,dust/mist Acute dermal toxicity: 10,000 mg/kg
CASRN 556-67-2 EC-No. 209-136-7 Index-No. 014-018-00-1		>= 0.2 - <= 0.29 %	Octamethylcyclotetrasiloxane	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

CASRN 68928-76-7

EC-No. 273-028-6

Index-No.

01-2120770324-57

$\geq 0.01 - \leq 0.02$ % Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy]
(dimethyl)stannane

Acute Tox. 4; H302
Skin Irrit. 2; H315
Skin Sens. 1A; H317
Aquatic Chronic 3; H412
Acute toxicity estimate
Acute oral toxicity:
892 mg/kg
Acute dermal toxicity:
> 2,000 mg/kg

PBT and vPvB substance

CASRN 540-97-6

EC-No. 208-762-8

Index-No.

–

$\geq 0.36 - \leq 0.43$ % Dodecamethylcyclohexasiloxane

Not classified
Acute toxicity estimate
Acute oral toxicity:
> 2,000 mg/kg
Acute dermal toxicity:
> 2,000 mg/kg

CASRN 541-02-6

EC-No. 208-764-9

Index-No.

$\geq 0.2 - \leq 0.31$ % Decamethylcyclopentasiloxane

Not classified
Acute toxicity estimate
Acute oral toxicity:
> 24,134 mg/kg
Acute inhalation toxicity:
8.67 mg/l, 4 Hour, dust/mist
Acute dermal toxicity:
> 2,000 mg/kg

Substances with a workplace exposure limit

CASRN 1328-53-6

EC-No. 215-524-7

Index-No. –

01-2119459333-39

≤ 1.22 % C.I. Pigment Green 7

Not classified
Acute toxicity estimate
Acute oral toxicity:
> 5,000 mg/kg

CASRN _

20344-49-4

EC-No. 243-746-4

Index-No. –

≤ 1.08 % Iron hydroxide Not classified

oxide

Acute toxicity estimate

Acute oral toxicity:
> 10,000 mg/kg

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

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice:

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

Inhalation: Move person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water.

Remove contaminated clothing and shoes while washing. Seek medical attention if irritation or rash occurs. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

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

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

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

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Maintain adequate ventilation and oxygenation of the patient. 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: Carbon oxides. Silicon oxides. Metal oxides. Cobalt compounds. Nitrogen oxides (NO_x). Chlorine compounds.

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health..

5.3 Advice for firefighters

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

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. 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..

SECTION 6: ACCIDENTAL RELEASE MEASURES

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

6.2 Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. 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: Wipe up or scrape up and contain for salvage or disposal. 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.

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 contact with eyes. Do not swallow. 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. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.

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

7.2 Conditions for safe storage, including any incompatibilities: Keep in properly labelled containers. Store 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): 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	US WEEL	TWA	10 ppm
Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane	ACGIH	TWA	0.1 mg/m ³ , Tin
Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption	ACGIH	STEL	0.2 mg/m ³ , Tin
Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption	GB EH40	TWA	0.1 mg/m ³ , Tin
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	0.2 mg/m ³ , Tin
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.			
Decamethylcyclopentasiloxane	US WEEL	TWA	10 ppm
C.I. Pigment Green 7	GB EH40	TWA Dusts and mists	1 mg/m ³ , Copper
	GB EH40	STEL Dusts and mists	2 mg/m ³ , Copper
Iron hydroxide oxide	GB EH40	TWA Fumes	5 mg/m ³ , Iron
	GB EH40	STEL Fumes	10 mg/m ³ , Iron
	GB EH40	TWA	1 mg/m ³ , Iron
	GB EH40	STEL	2 mg/m ³ , Iron

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

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

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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/m ³

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

octamethylcyclotetrasiloxane

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/m ³	n.a. 73 mg/m ³

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/m ³ 3.7 mg/kg bw/day	n.a. 13 mg/m ³

Dodecamethyl cyclohexasiloxane

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. 6.1 mg/m ³	n.a. 11 mg/m ³	n.a. 1.22 mg/m ³

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. 1.7 mg/kg bw/day	n.a. 1.5 mg/m ³	n.a. 2.7 mg/m ³ 1.7 mg/kg bw/day	n.a. 0.3 mg/m ³

Decamethylcyclopentasiloxane

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. 97.3 mg/m ³	n.a. 24.2 mg/m ³	n.a. 97.3 mg/m ³	n.a. 24.2 mg/m ³

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. 17.3 mg/m ³	5 mg/kg bw/day n.a. 4.3 mg/m ³	n.a. 17.3 mg/m ³ 5 mg/kg bw/day	n.a. 4.3 mg/m ³

C.I. Pigment Green 7

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.			450 mg/kg bw/day		4 mg/m ³		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.			225 mg/kg bw/day		n.a. 45 mg/kg bw/day		n.a. n.a.	
Iron hydroxide oxide											
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. 10 mg/m ³		n.a. 10 mg/m ³			
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. n.a.		n.a.		n.a. n.a.	
Predicted No Effect Concentration											
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]											
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									
octamethylcyclotetrasiloxane											
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									
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									
C.I. Pigment Green 7											
Compartment		PNEC									

Fresh water sediment	10 mg/kg
Marine sediment	1 mg/kg
Soil	1 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. Local exhaust ventilation may be necessary for some operations.

Hygiene measures: Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

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. 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"). Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 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. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C, meeting standard EN 14387).

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

Appearance

Physical state	paste
Colour	in accordance with the product description
Odour	acetic acid
Odour Threshold	No data available
pH	Not applicable
Melting point/freezing point	
Melting point/range	No data available
Freezing point	not determined

Boiling point or initial boiling point and boiling range	
Boiling point (760 mmHg)	Not applicable
Flash point	closed cup >100 °C
Flammability (solid, gas)	Not classified as a flammability hazard
Flammability (liquids)	Not applicable, solid
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.02
Solubility(ies)	
Water solubility	not determined
Partition coefficient: n-octanol/water	not determined
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic Viscosity	Not applicable, solid
Particle characteristics	
Particle size	not determined
9.2 Other information	
Molecular weight	No data available
Dynamic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Self-heating substances	The substance or mixture is not classified as self heating.
Evaporation Rate (Butyl Acetate = 1)	Not applicable

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: Avoid contact with oxidizing materials.
- 10.6 Hazardous decomposition products:
Decomposition products can include and are not limited to: 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

Information on likely routes of exposure

Eye contact, Skin contact, Ingestion.

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

Acute oral toxicity

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

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

Based on information for component(s):

LD50, Rat, > 5,000 mg/kg Estimated.

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

LD50, Rat, > 10,000 mg/kg

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

LD50, Rat, male and female, 892 mg/kg OECD 401 or equivalent

Dodecamethyl cyclohexasiloxane

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

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

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

Iron hydroxide oxide

LD50, Rat, > 10,000 mg/kg

Acute dermal toxicity

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, Rabbit, > 2,000 mg/kg Estimated.

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

LD50, Rabbit, 10,000 mg/kg

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

LD50, Rat, > 2,000 mg/kg

Dodecamethyl cyclohexasiloxane

LD50, Rabbit, male and female, > 2,000 mg/kg

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

The dermal LD50 has not been determined.

Iron hydroxide oxide

The dermal LD50 has not been determined.

Acute inhalation toxicity

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

As product: The LC50 has not been determined.

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

LC50, Rat, male, 4 Hour, dust/mist, > 6.82 mg/l No deaths occurred at this concentration.

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

As product: The LC50 has not been determined.

Dodecamethyl cyclohexasiloxane

The LC50 has not been determined.

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

The LC50 has not been determined.

Iron hydroxide oxide

The LC50 has not been determined.

Skin corrosion/irritation

Based on information for component(s):

Prolonged exposure not likely to cause significant skin irritation.

May cause more severe response if skin is abraded (scratched or cut).

May cause more severe response on covered skin (under clothing, gloves).

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Essentially nonirritating to skin.

octamethylcyclotetrasiloxane

Brief contact is essentially nonirritating to skin.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

Brief contact may cause skin irritation with local redness.

Dodecamethyl cyclohexasiloxane

Essentially nonirritating to skin.

Decamethylcyclopentasiloxane

Prolonged contact is essentially nonirritating to skin.

C.I. Pigment Green 7

Brief contact may cause slight skin irritation with local redness.

Iron hydroxide oxide

Prolonged contact may cause skin irritation with local redness.

Serious eye damage/eye irritation

Based on information for component(s):

May cause slight temporary eye irritation.

May cause mild eye discomfort.

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Solid or dust may cause irritation due to mechanical action.

octamethylcyclotetrasiloxane

Essentially nonirritating to eyes.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

May cause slight eye irritation.

May cause slight temporary corneal injury.

Dodecamethyl cyclohexasiloxane

May cause slight temporary eye irritation.

Corneal injury is unlikely.

Decamethylcyclopentasiloxane

Essentially nonirritating to eyes.

C.I. Pigment Green 7

May cause slight eye irritation.

Iron hydroxide oxide

May cause eye irritation.

Sensitization

For skin sensitization:

Contains component(s) which have caused allergic skin sensitization in guinea pigs.

For respiratory sensitization:

No relevant data found.

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Did not demonstrate the potential for contact allergy in mice.

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

For respiratory sensitization:

No relevant data found.

octamethylcyclotetrasiloxane

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

For respiratory sensitization:

No relevant data found.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

Dodecamethyl cyclohexasiloxane

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

For respiratory sensitization:

No relevant data found.

Decamethylcyclopentasiloxane

Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

C.I. Pigment Green 7

Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

Iron hydroxide oxide

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

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

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

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

Dodecamethyl cyclohexasiloxane

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

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

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

Iron hydroxide oxide

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

Aspiration Hazard

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

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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

octamethylcyclotetrasiloxane

May be harmful if swallowed and enters airways.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

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

Dodecamethyl cyclohexasiloxane

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

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

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

Iron hydroxide oxide

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

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)

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

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Repeated excessive inhalation exposures to dusts may cause respiratory effects.

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

Lung.

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

octamethylcyclotetrasiloxane

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

Kidney.

Liver.

Respiratory tract.

Female reproductive organs.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

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

Blood

Kidney

Liver

Immune system.

Dodecamethyl cyclohexasiloxane

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

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

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

Iron hydroxide oxide

No relevant data found.

Carcinogenicity

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

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Lung fibrosis and tumors have been observed in rats exposed to titanium dioxide in two lifetime inhalation studies.

Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Workers exposed to titanium dioxide in the workplace have not shown an unusual incidence of chronic respiratory disease or lung cancer. Titanium dioxide was not carcinogenic in laboratory animals in lifetime feeding studies. Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

octamethylcyclotetrasiloxane

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.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

No relevant data found.

Dodecamethyl cyclohexasiloxane

No relevant data found.

Decamethylcyclopentasiloxane

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.

C.I. Pigment Green 7

No relevant data found.

Iron hydroxide oxide

No relevant data found.

Teratogenicity

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

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

No relevant data found.

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

No relevant data found.

Dodecamethyl cyclohexasiloxane

No relevant data found.

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

No relevant data found.

Iron hydroxide oxide

No relevant data found.

Reproductive toxicity

In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals. Contains component(s) which have interfered with fertility in animal studies.

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

No relevant data found.

octamethylcyclotetrasiloxane

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.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

No relevant data found.

Dodecamethyl cyclohexasiloxane

In animal studies, did not interfere with reproduction.

Decamethylcyclopentasiloxane

In animal studies, did not interfere with reproduction.

C.I. Pigment Green 7

No relevant data found.

Iron hydroxide oxide

No relevant data found.

Mutagenicity

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Genetic toxicity studies in animals were negative for component(s) tested.

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

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

Dodecamethyl cyclohexasiloxane

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

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

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

Iron hydroxide oxide

No relevant data found.

11.2 Information on other hazards

Endocrine disrupting properties

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

Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

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

Dodecamethyl cyclohexasiloxane

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

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

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

Iron hydroxide oxide

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

SECTION 12: ECOLOGICAL INFORMATION

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

12.1 Toxicity

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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).

NOEC mortality, *Leuciscus idus* (Golden orfe), static test, 48 Hour, > 1,000 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, > 1,000 mg/l

Acute toxicity to algae/aquatic plants

EC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, > 100 mg/l, OECD Test Guideline 201

Toxicity to bacteria

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

octamethylcyclotetrasiloxane

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.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

Acute toxicity to fish

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

For similar material(s):

LC50, Zebra fish (*Danio/Brachydanio rerio*), semi-static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna*, static test, 48 Hour, 39 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, Algae (*Scenedesmus subspicatus*), Growth rate, 72 Hour, Growth rate, 7.6 mg/l, OECD Test Guideline 201 or Equivalent

For similar material(s):

NOEC, Algae (*Scenedesmus subspicatus*), Growth rate, 72 Hour, Growth rate, 1.1 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

For similar material(s):

EC50, Bacteria, 3 Hour, Respiration rates., 14 mg/l

Dodecamethyl cyclohexasiloxane

Acute toxicity to algae/aquatic plants

Not expected to be acutely toxic to aquatic organisms.

No toxicity at the limit of solubility

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, > 0.002 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 $\mu\text{g/l}$, 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

C.I. Pigment Green 7

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, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 356 mg/l, Method Not Specified.

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), Static, 48 Hour, > 500 mg/l, Directive 84/449/EEC, C.2

Acute toxicity to algae/aquatic plants

EC50, Desmodesmus subspicatus (green algae), Static, 72 Hour, > 100 mg/l, OECD Test Guideline 201

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna, semi-static test, 21 d, Immobilization, > 1 mg/l

Iron hydroxide oxide

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, Leuciscus idus (Golden orfe), static test, 96 Hour, > 500 mg/l

Acute toxicity to aquatic invertebrates

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

12.2 Persistence and degradability

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Biodegradability: Biodegradation is not applicable.

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

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

For similar material(s): 10-day Window: Fail

Biodegradation: 3 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

Dodecamethyl cyclohexasiloxane

Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Fail

Biodegradation: 4.5 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

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

C.I. Pigment Green 7

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

10-day Window: Fail

Biodegradation: 5 %

Exposure time: 28 d

Method: OECD Test Guideline 301C

Iron hydroxide oxide

Biodegradability: Biodegradation is not applicable.

12.3 Bioaccumulative potential

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

Bioaccumulation: No relevant data found.

Dodecamethyl cyclohexasiloxane

Bioaccumulation: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

Partition coefficient: n-octanol/water(log Pow): 8.87

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.

C.I. Pigment Green 7

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

Bioconcentration factor (BCF): 0.51 - 74 Fish 42 d

Iron hydroxide oxide

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

12.4 Mobility in soil

octamethylcyclotetrasiloxane

Partition coefficient (Koc): 16596 OECD Test Guideline 106

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

No relevant data found.

Decamethylcyclopentasiloxane

Partition coefficient (Koc): > 5000 Estimated.

C.I. Pigment Green 7

No relevant data found.

Iron hydroxide oxide

No relevant data found.

12.5 Results of PBT and vPvB assessment

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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

octamethylcyclotetrasiloxane

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

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

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

Dodecamethyl cyclohexasiloxane

Dodecamethyl cyclohexasiloxane (D6) meets the current REACH Annex XIII criteria for vPvB. However, D6 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D6 is not biomagnifying in aquatic and terrestrial food webs. D6 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D6 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

Decamethylcyclopentasiloxane

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".

C.I. Pigment Green 7

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

Iron hydroxide oxide

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 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.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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

octamethylcyclotetrasiloxane

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

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

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

Dodecamethyl cyclohexasiloxane

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

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

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

Iron hydroxide oxide

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

12.7 Other adverse effects

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

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.

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane

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

Dodecamethyl cyclohexasiloxane

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

Decamethylcyclopentasiloxane

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

C.I. Pigment Green 7

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

Iron hydroxide oxide

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 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	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.

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

Conditions of restriction for the following entries should be considered:

octamethylcyclotetrasiloxane (Number on list 70)

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane (Number on list 20)

Decamethylcyclopentasiloxane (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

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

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

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.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer if inhaled.

H361f Suspected of damaging fertility.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

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

This product is not classified as dangerous according to EC criteria.

Revision

Identification Number: 4022480 / A279 / Issue Date: 08.04.2021 / Version: 4.0

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)

GB EH40 UK. EH40 WEL - Workplace Exposure Limits

STEL Short-term exposure limit

TWA 8-hour, time-weighted average

US WEEL USA. Workplace Environmental Exposure Levels (WEEL)

Acute Tox. Acute toxicity

Aquatic Chronic Long-term (chronic) aquatic hazard

Carc. Carcinogenicity

Flam. Liq. Flammable liquids

Repr. Reproductive toxicity

Skin Irrit. Skin irritation

Skin Sens. Skin sensitisation

Full text of other abbreviations

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

REGIN PRODUCTS 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.