Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Issue date: 25/3/2024 Version: 1.0

DOWSIL™ 786 Silicone Sanitary Sealant

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Name/Identifier

DOWSIL™ 786 Silicone Sanitary Sealant.

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

Sealant.

1.3. Details of the supplier of the safety data sheet

Premier Sealant Systems Ltd.
Mercia Way,
Foxhills Industrial Park,
Scunthorpe,
North Lincolnshire,
DN15 8RE
Tel. 01724 864 100

1.4. Emergency telephone number

NPIS (National Poisons Information Service): 0344 892 0111 (for medical professionals only). For medical advice, members of the public should contact NHS 111 in England: 111; NHS 24 in Scotland: 111; NHS Direct in Wales: 111 or 0845 4647. In Northern Ireland: contact your local GP or pharmacist. In Europe call 112.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2. Label elements

Hazard statements:
Not applicable.

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

Supplemental label information
EUH210 Safety data sheet available on request.
EUH208 Contains: Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane. May produce an allergic reaction.

2.3. Other hazards
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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable.

3.2. Mixtures

Silicone elastomer mixture.

CASRN / EC-No. / Index-No.	UK REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008, as retained and amended in UK law
CASRN 13463-67-7 **EC-No.** 236-675-5 **Index-No.** –	–	>= 0.43 - <= 0.95 %	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 68928-76-7 **EC-No.** 273-028-6 **Index-No.** –	–	>= 0.007 - <= 0.034 %	Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stanna ne	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.** –	–	>= 0.15 - <= 0.26 %	Dodecamethyl cyclohexasiloxane	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.** –	–	>= 0.06 - <= 0.12 %	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

Other information:

Not applicable.

4. FIRST AID MEASURES

4.1. Description of first aid measures

General information

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

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

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

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.

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.

Notes for the doctor

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

Specific treatments
Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

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

Unsuitable extinguishing media
None known.

5.2. Special hazards arising from the substance or mixture

Specific hazards
Carbon oxides. Silicon oxides. Exposure to combustion products may be a hazard to health.

5.3. Advice for firefighters

Use water spray to cool unopened containers. Evacuate area. 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
Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

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.

Methods and material 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.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Usage precautions

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.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash their hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Keep in properly labelled containers. Store in accordance with the particular national regulations and manufacturer recomendations.
Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers: None known.

Storage class

Not classified.

7.3. Specific end use(s)

Field of application of the product is described in Technical Data Sheet (TDS).

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
Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimet hyl)stannane	ACGIH	TWA	0.1 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	ACGIH	STEL	0.2 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	GB EH40	TWA	0.1 mg/m3 , 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/m3 , 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

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 Securité, (INRS), France.

Derived No Effect Level

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

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.	0.170 mg/m3

Consumers

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.028 mg/m3

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/m3	n.a.	n.a.	n.a.	1.22 mg/m3

Consumers

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	1.5 mg/m3	n.a.	n.a.	n.a.	n.a.	0.3 mg/m3

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.	n.a.	n.a.	n.a.	n.a.	97.3 mg/m3	n.a.	24.2 mg/m3

Consumers

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	17.3 mg/m3	5 mg/kg bw/day	n.a.	4.3 mg/m3

Predicted No Effect Concentration

Dodecamethyl cyclohexasiloxane

Compartment	PNEC
Fresh water sediment	13.5 mg/kg dry weight (d.w.)
Marine sediment	1.35 mg/kg dry weight (d.w.)
Oral	66.7 mg/kg food

Decamethylcyclopentasiloxane

Compartment	PNEC
Fresh water	> 0.0012 mg/l
Marine water	> 0.00012 mg/l
Fresh water sediment	11 mg/kg
Marine sediment	1.1 mg/kg
Soil	2.54 mg/kg
Sewage treatment plant	10 mg/l
Oral	16 mg/kg food

8.2. Exposure controls

Appropriate 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.

Eye/face protection

Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Hand protection

Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Natural rubber ("latex"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 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 skin and body 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 ºC, meeting standard EN 14387).

Hygiene measures

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

Environmental exposure controls

Avoid releasing to environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Paste
Colour	White
Odour	Acetic acid
Odour threshold	Not available
pH	Not available
Melting point	Not determined
Initial boiling point and range	Not available
Flash point	Not determined
Evaporation rate	No information available
Evaporation factor	No information available
Flammability (solid, gas)	Not classified as a flammability hazard
Upper/lower flammability or explosive limits	No information available
Vapour pressure at 20 °C	No information available
Vapour pressure at 50 °C	No information available
Vapour density	No information available
Density	Not determined
Relative density	1.04
Solubility(ies)	Not soluble in water
Partition coefficient	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Explosive properties	Not applicable
Oxidising properties	The substance or mixture is not classified as oxidizing

9.2. Other information

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

10. STABILITY AND REACTIVITY

10.1. Reactivity

Not classified as a reactivity hazard. See section 7.

10.2. Chemical stability
Chemically stable under the indicated conditions of storage, handling and use.

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.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity (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

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

Acute toxicity (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, > 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

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.

Acute toxicity (Acute inhalation toxicity)

Information for the Product:
Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.
As product: The LC50 has not been determined.

Information for components:
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.

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.

Skin Corrosion/Irritation

Based on information for component(s):
Prolonged contact is essentially nonirritating to skin.
May cause drying and flaking of the skin.

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

Serious Eye Damage/Irritation

Based on information for component(s):
May cause slight temporary eye irritation.
Corneal injury is unlikely.
May cause mild eye discomfort.

Information for components:
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ⩽ 10 µm]
Solid or dust may cause irritation due to mechanical action.

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.

Respiratory or Skin Sensitisation

For skin sensitization:
Contains component(s) which have caused allergic skin sensitization in guinea pigs.
For respiratory sensitization:
No relevant information found.

Information for components:
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ⩽ 10 µm]
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.

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.

Germ Cell Mutagenicity

Information for the Product:
Product test data not available.
Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ⩽ 10 µm]
In vitro genetic toxicity studies were negative in some cases and positive in other cases. 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.

Carcinogenicity

Information for the Product:
Product test data not available.
Information for components:

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

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.

Reproductive Toxicity

Information for the Product:
Product test data not available.
Information for components:

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ⩽ 10 µm]
No relevant data found.

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.

Specific target organ toxicity (single exposure)

Information for the Product:
Product test data not available.
Information for components:

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

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.

Specific target organ toxicity (repeated exposure)

Information for the Product:
Product test data not available.
Information for components:

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

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.

Aspiration Hazard
Information for the Product:
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 ⩽ 10 µm]
Based on physical properties, not likely to be an aspiration hazard.

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.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

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

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 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

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.

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.

12.3. Bioaccumulative potential

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.

12.4. Mobility in soil

Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane
No relevant data found.

Dodecamethyl cyclohexasiloxane
Partition coefficient (Koc): > 5000

Decamethylcyclopentasiloxane
Partition coefficient (Koc): > 5000 Estimated.

12.1. Results of PBT and vPvB assessment

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]
This substance has not been assessed for persistence, bioaccumulation and toxicity (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".
This substance is considered to be persistent, bioaccumulating and toxic (PBT).
This substance is considered to be very persistent and very bioaccumulating (vPvB).

12.2. Other adverse effects

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

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 ECDirective 2008/98/EC, provided it fulfils the criteria listed in Annex III of this directive. 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.

Disposal methods
Dispose of in accordance with local regulations.

13.2. Waste class

EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

14. TRANSPORT INFORMATION

14.1. Clasification for ROAD and Rail transport (ADR/RID)

Non-applicable.

14.2. Transport by sea GGVSee/IMDG-Code

Non-applicable.

14.3. Air Transport ICAO-TI/IATA-DGR

Non-applicable.

15. REGULATORY INFORMATION

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

UK REACH - UK Statutory Instruments 2019 No.758 as amended
This product contains only components that have been either registered, notified for downstream user import (DUIN), are exempt from registration, are regarded as registered or are not subject to registration according to UK Statutory Instruments 2019 No.758 as amended (UK REACH)., The aforementioned indications of the UK REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

UK REACH List of restrictions (Annex 17)
Conditions of restriction for the following entries should be considered:
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.: 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

The Control of Major Accident Hazards Regulations 2015:
Listed in Regulation: Not applicable.

Other legislation
Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the Pregnant Workers Directive 92/85/EEC.
Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

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

16. OTHER INFORMATION

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer if inhaled.
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

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

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
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 - 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.

Revision comments

Revision date
25/03/2024
Revision
1
Supersedes date
Not applicable
SDS status
Approved.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.