



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008  
This SDS is for generic information purposes and does not reflect required country specific information for OEL

**BOSTIK FIREBOND SILMAX PRO GREY**  
Supersedes Date: 12-Mar-2021

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product Name BOSTIK FIREBOND SILMAX PRO GREY

### Other means of identification

Pure substance/mixture Mixture

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

Recommended use Sealant

Uses advised against None known.

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

#### Company Name

Bostik SA  
420 rue d'Estienne d'Orves  
92700 Colombes  
FRANCE  
Tel: +33 (0)1 49 00 90 00

E-mail address SDS.box-EU@bostik.com

### 1.4. Emergency telephone number

Emergency Telephone 112

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

### 2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

#### Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

#### EU Specific Hazard Statements

EUH208 - Contains Trimethoxyvinylsilane & N-(3-(trimethoxysilyl)propyl)ethylenediamine & 3-aminopropyltriethoxysilane & Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine. May produce an allergic reaction  
EUH210 - Safety data sheet available on request

### 2.3. Other hazards

Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing. Small amounts of ethanol (CAS

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64-17-5) are formed by hydrolysis and released upon curing. Harmful to aquatic life.

## PBT & vPvB

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

### 3.2 Mixtures

Chemical name	EC No (EU Index No).	CAS No.	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	REACH registration number
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine 1 - <2.5 %	309-629-8	100545-48-0	Skin Sens. 1B (H317)	Skin Sens. 1 :: C>=25%	-	-	01-2119979085-27-XXXX
Trimethoxyvinylsilane 0.1- <1 %	(014-049-00-0) 220-449-8	2768-02-7	Skin Sens. 1B (H317) Acute Tox. 4 (H332) Flam. Liq. 3 (H226)	-	-	-	01-2119513215-52-XXXX
Titanium dioxide 0.1- <1 %	(022-006-00-2) 236-675-5	13463-67-7	[C]	-	-	-	01-2119489379-17-XXXX
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 0.1 - <0.5 %	258-207-9	52829-07-9	Eye Dam. 1 (H318) Repr. 2 (H361f) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)	-	-	-	01-2119537297-32-XXXX
3-aminopropyltriethoxysilane 0.1 - <0.3 %	(612-108-00-0) 213-048-4	919-30-2	Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 4 (H302)	-	-	-	01-2119480479-24-XXXX
Diocetyl tin oxide 0.1 - <0.3 %	212-791-1	870-08-6	STOT SE 2 (H371)	-	-	-	01-2119971268-27-xxxx
N-(3-(trimethoxysilyl)propyl)ethylenediamine 0.1 - <0.3 %	217-164-6	1760-24-3	Eye Dam. 1 (H318) Skin Sens. 1B (H317) STOT SE 3 (H335)	-	-	-	01-2119970215-39-XXXX

### Air contaminants formed when using the substance or mixture as intended

Chemical name	EC No (EU Index No)	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	REACH registration number
Ethanol 64-17-5	(603-002-00-5) 200-578-6	1 - <2.5	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319)	-	-	-	01-2119457610-43-XXXX
Methyl alcohol 67-56-1	(603-001-00-X) 200-659-6	1 - <2.5	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370) Flam. Liq. 2 (H225)	STOT SE 1 :: C>=10% STOT SE 2 :: 3%<=C<10%	-	-	01-2119433307-44-XXXX

**Full text of H- and EUH-phrases: see section 16**

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Classification according to Regulation (EC) No. 1272/2008 [CLP] - Notes

[C] - Components with occupational exposure limits and/or biological occupational exposure limits requiring monitoring

## Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	EC No (EU Index No)	CAS No	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	309-629-8	100545-48-0	-	-	-	-	-
Trimethoxyvinylsilane	(014-049-00-0) 220-449-8	2768-02-7	-	-	-	11	-
Titanium dioxide	(022-006-00-2) 236-675-5	13463-67-7	-	-	-	-	-
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	258-207-9	52829-07-9	-	-	-	-	-
3-aminopropyltriethoxy silane	(612-108-00-0) 213-048-4	919-30-2	1490	-	-	-	-
Dioctyltin oxide	212-791-1	870-08-6	-	-	-	-	-
N-(3-(trimethoxysilyl)propyl)ethylenediamine	217-164-6	1760-24-3	-	-	1.5	-	-

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## Notes

See section 16 for more information

Chemical name	Notes
Titanium dioxide - 13463-67-7	V,W,10

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. If medical advice is needed, have product container or label at hand.
<b>Inhalation</b>	Remove to fresh air. If symptoms persist, call a doctor.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Skin contact</b>	In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and water.
<b>Ingestion</b>	Call a doctor immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Small amounts of toxic methanol are released by hydrolysis.

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

Symptoms None known.

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

Note to doctors Treat symptomatically. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

## **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

Suitable Extinguishing Media Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

Unsuitable extinguishing media Full water jet.

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

Specific hazards arising from the chemical Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous combustion products Carbon oxides. Carbon monoxide. Carbon dioxide (CO<sub>2</sub>).

### 5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Wear self contained breathing apparatus for fire fighting if necessary.

## **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.

For emergency responders Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

Environmental precautions Prevent product from entering drains. Do not allow to enter into soil/subsoil. See Section 12 for additional Ecological Information.

### 6.3. Methods and material for containment and cleaning up

Methods for containment Do not scatter spilled material with high pressure water streams.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

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**Advice on safe handling** Ensure adequate ventilation.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

## 7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions** Protect from moisture. Keep away from food, drink and animal feedingstuffs.

**Recommended storage temperature** Keep at temperatures between 10 and 35 °C.

## 7.3. Specific end use(s)

**Specific use(s)**  
Sealant.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**Other information** Observe technical data sheet.

## **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

**Exposure Limits** Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing Small amounts of ethanol (CAS 64-17-5) are formed by hydrolysis and released upon curing This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product

**Only European Community Occupational Exposure Limits will be shown in this document. Please refer to regional SDS for further information.**

Chemical name	European Union
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> *

**Derived No Effect Level (DNEL)** No information available

<b>Derived No Effect Level (DNEL)</b>			
<b>Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (100545-48-0)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Local health effects	Inhalation	3.35 mg/m <sup>3</sup>	

<b>Trimethoxyvinylsilane (2768-02-7)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Systemic health effects Long term	Inhalation	27,6 mg/m <sup>3</sup>	
worker Systemic health effects Long term	Dermal	3,9 mg/kg bw/d	

<b>Titanium dioxide (13463-67-7)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor

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worker Long term Local health effects	Inhalation	10 mg/m <sup>3</sup>	
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### **Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)**

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Short term Long term Systemic health effects	Inhalation	2.82 mg/m <sup>3</sup>	
worker Long term Systemic health effects	Dermal	1.6 mg/kg	

### **3-aminopropyltriethoxysilane (919-30-2)**

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	59 mg/m <sup>3</sup>	
worker Short term Systemic health effects	Inhalation	59 mg/m <sup>3</sup>	
worker Long term Systemic health effects	Dermal	8.3 mg/kg bw/d	
worker Short term Systemic health effects	Dermal	8.3 mg/kg bw/d	

### **Diocetyl tin oxide (870-08-6)**

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Dermal	0.05 mg/kg bw/d	
worker Long term Systemic health effects	Inhalation	0.004 mg/m <sup>3</sup>	

### **N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)**

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects worker	Inhalation	35.5 mg/m <sup>3</sup>	
Long term Systemic health effects worker	Dermal	5 mg/kg bw/d	
Short term Systemic health effects worker	Dermal	5 mg/kg bw/d	

### **Derived No Effect Level (DNEL)**

#### **Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (100545-48-0)**

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer	Inhalation	0.83 mg/m <sup>3</sup>	

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Long term			
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<b>Trimethoxyvinylsilane (2768-02-7)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Systemic health effects Long term	Inhalation	18,9 mg/m <sup>3</sup>	
Consumer Systemic health effects Long term	Dermal	7,8 mg/kg bw/d	
Consumer Systemic health effects Long term	Oral	0,3 mg/kg bw/d	

<b>Titanium dioxide (13463-67-7)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Oral	700 mg/kg bw/d	

<b>Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Dermal	0.8 mg/kg	
Consumer Long term Systemic health effects	Oral	0.4 mg/kg	

<b>3-aminopropyltriethoxysilane (919-30-2)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	17 mg/m <sup>3</sup>	
Consumer Short term Systemic health effects	Inhalation	17.4 mg/m <sup>3</sup>	
Consumer Long term Systemic health effects	Dermal	5 mg/kg bw/d	
Consumer Short term Systemic health effects	Dermal	5 mg/kg bw/d	

<b>Diocetyl tin oxide (870-08-6)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Oral	0.0005 mg/kg bw/d	
Consumer Long term Systemic health effects	Dermal	0.025 mg/kg bw/d	
Consumer Long term Systemic health effects	Inhalation	0.0009 mg/m <sup>3</sup>	

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<b>N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects Consumer	Oral	2.5 mg/kg bw/d	
Long term Systemic health effects Consumer	Inhalation	8.7 mg/m <sup>3</sup>	
Long term Systemic health effects Consumer	Dermal	mg/kg bw/d	

## Predicted No Effect Concentration (PNEC)

<b>Predicted No Effect Concentration (PNEC)</b>	
<b>Trimethoxyvinylsilane (2768-02-7)</b>	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.34 mg/l
Marine water	0.034 mg/l
Microorganisms in sewage treatment	110 mg/l

<b>Titanium dioxide (13463-67-7)</b>	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Marine water	0.0184 mg/l
Freshwater sediment	1000 mg/kg
Freshwater	0.184 mg/l
Marine sediment	100 mg/kg
Soil	100 mg/kg
Microorganisms in sewage treatment	100 mg/l
Freshwater - intermittent	0.193 mg/l

<b>Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)</b>	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.018 mg/l
Marine water	0.0018 mg/l
Freshwater sediment	29 mg/kg
Marine sediment	2.9 mg/kg
Soil	5.9 mg/kg

<b>3-aminopropyltriethoxysilane (919-30-2)</b>	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.33 mg/l
Marine water	0.033 mg/l

<b>Diocetyl tin oxide (870-08-6)</b>	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater sediment	0.02798 mg/kg dry weight
Marine sediment	0.002798 mg/kg dry weight
Microorganisms in sewage treatment	100 mg/l

<b>N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)</b>	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.062 mg/l
Marine water	0.0062 mg/l
Freshwater - intermittent	0.62 mg/l
Freshwater sediment	0.05 mg/kg
Marine sediment	0.005 mg/kg
Soil	0.0075 mg/kg

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Sewage treatment plant	25 mg/l
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## 8.2. Exposure controls

**Engineering controls** Ensure adequate ventilation, especially in confined areas.

### Personal protective equipment

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.
<b>Hand protection</b>	Wear suitable gloves. Recommended Use: Neoprene™. Nitrile rubber. Butyl rubber. Glove thickness > 0.7mm. The breakthrough time for the mentioned glove material is in general greater than 480 min. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374
<b>Skin and body protection</b>	None under normal use conditions.
<b>Respiratory protection</b>	In case of inadequate ventilation wear respiratory protection. Wear a respirator conforming to EN 140 with Type A/P2 filter or better. Ensure adequate ventilation, especially in confined areas.
<b>Recommended filter type:</b>	Organic gases and vapours filter conforming to EN 14387. White. Brown.

**Environmental exposure controls** Do not allow uncontrolled discharge of product into the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	Solid
<b>Appearance</b>	Paste
<b>Colour</b>	Grey
<b>Odour</b>	Slight. Characteristic.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	No data available	Not applicable
<b>Initial boiling point and boiling range</b>	No data available	Not applicable
<b>Flammability</b>	Not applicable for liquids .	
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Flash point</b>	approx . °C	Not applicable
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>pH</b>	No data available	Not applicable.
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	7500 12500 Pa.s	Spindle ZU4 @ 1 rpm @ 23 °C
<b>Water solubility</b>	No data available. Product cures with moisture	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Vapour pressure</b>	< 1100	hPa @ 50 °C
<b>Relative density</b>	No data available	None known
<b>Bulk Density</b>	No data available	
<b>Liquid Density</b>	1.42 - 1.50 g/ml	
<b>Relative vapour density</b>	No data available	None known
<b>Particle characteristics</b>		
<b>Particle Size</b>	No information available	
<b>Particle Size Distribution</b>	No information available	

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## 9.2. Other information

**Solid content (%)** No information available  
**VOC content** No data available

9.2.1. Information with regards to physical hazard classes  
Not applicable

9.2.2. Other safety characteristics  
No information available

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

**Reactivity** Product cures with moisture.

### 10.2. Chemical stability

**Stability** Stable under normal conditions.

### Explosion data

**Sensitivity to mechanical impact** None.  
**Sensitivity to static discharge** None.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### 10.4. Conditions to avoid

**Conditions to avoid** Product cures with moisture. Protect from moisture. Exposure to air or moisture over prolonged periods. Do not freeze. Keep away from open flames, hot surfaces and sources of ignition.

### 10.5. Incompatible materials

**Incompatible materials** None known based on information supplied.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Small amounts of ethanol (CAS 64-17-5) are formed by hydrolysis and released upon curing. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

## **SECTION 11: Toxicological information**

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

#### Information on likely routes of exposure

#### **Product Information**

**Inhalation** Based on available data, the classification criteria are not met.  
**Eye contact** Based on available data, the classification criteria are not met.  
**Skin contact** Based on available data, the classification criteria are not met. May cause sensitisation in susceptible persons.

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**Ingestion** Based on available data, the classification criteria are not met.

## Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** No information available.

## Acute toxicity

## Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document  
**ATEmix (inhalation-dust/mist)** 279.40 mg/l

## Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	LD50 >2000 mg/kg (Rattus)	-	LC50 > 5.05 mg/kg (Rattus)
Trimethoxyvinylsilane	LD50 = 7120 -7236 mg/kg (Rattus) OECD 401	= 3540 mg/kg (Oryctolagus cuniculus)	LC50 (4hr) 16.8 mg/l (Rattus) OECD TG 403
Titanium dioxide	>10000 mg/kg (Rattus)	LD50 > 5000 mg/Kg	= 5.09 mg/L ( Rattus ) 4 h
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	LD50 (Rattus) > 2000 mg/kg OECD 423	LD50 (Rattus) > 3 170 mg/kg OECD 402	=500 mg/m <sup>3</sup> (Rattus) 4 h
3-aminopropyltriethoxysilane	LD50 = 1490 mg/kg (Rattus, female) EPA OTS 798.1175 LD50 = 2690 mg/kg (Rattus, male) EPA OTS 798.1175	LD50 = 4076 mg/kg (Oryctolagus cuniculus) EPA OTS 798.1100	LC50 >144 mg/L (6h) Rattus (Vapour)
Dioctyltin oxide	=2500 mg/kg (Rattus)	LD50 > 2000 mg/kg (Rattus) OECD 402	-
N-(3-(trimethoxysilyl)propyl)ethylenediamine	LD50 = 2295 mg/kg (Rattus) EPA OPPTS 870.1100	LD50 > 2000 mg/kg (Oryctolagus cuniculus) EPA OPPTS 870.1200	1.49 - 2.44 mg/L ( Rat ) 4 h

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (100545-48-0)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 431: In Vitro Skin Corrosion: Human Skin Model Test	EPISKIN™	in vitro	0.02 g	4 hours	Non-irritant

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal	0.5 mL	24 hours	Non-irritant

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			Non-irritant

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404:	Rabbit	Dermal			Non-irritant

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Acute Dermal Irritation/Corrosion					
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**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (100545-48-0)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye	0.1 mL	72 hours	Non-irritant

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye		24 hours	Non-irritant

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye			Non-irritant

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			Eye Damage

**Respiratory or skin sensitisation** OECD Test No. 406: Skin Sensitisation. No sensitisation responses were observed. No classification is proposed, based on conclusive negative data. May cause sensitisation in susceptible persons.

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation	Guinea pig	Dermal	No sensitisation responses were observed

Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (100545-48-0)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation	Guinea pig	Dermal	Sensitizing > 25 %

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation, Buehler test	Guinea pig	Dermal	sensitising

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation	Guinea pig	Dermal	Not a skin sensitiser
OECD Test No. 429: Skin Sensitisation: Local Lymph Node Assay	Mouse	Dermal	Not a skin sensitiser

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation	Guinea pig		No sensitisation responses were observed

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**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

Component Information  
Trimethoxyvinylsilane (2768-02-7)

Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro	Not mutagenic

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (100545-48-0)

Method	Species	Results
OECD Test No. 421: Reproduction/Developmental Toxicity Screening Test	Rat	Not Classifiable

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Results
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Not Classifiable

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Method	Species	Results
OECD Test No. 414: Pre-natal Development Toxicity Study	Rat, Rabbit	reproductive toxicant

**STOT - single exposure** Based on available data, the classification criteria are not met.

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)  
Diocetyl tin oxide (870-08-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat	Oral	5 mg/kg	28 days	0.3 - 0.5 mg/kg bw/d May cause damage to the following organs: Immune system

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

Trimethoxyvinylsilane (2768-02-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 413: Sub-chronic Inhalation Toxicity: 90-day Study	Rat	Inhalation vapour		90 days	0.058 NOAEL

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Diocetyl tin oxide (870-08-6)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rat Rabbit			28 days	0.3 -0.5 mg/kg bw/d

**Aspiration hazard** Based on available data, the classification criteria are not met.

## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

**Endocrine disrupting properties** No information available.

### 11.2.2. Other information

**Other adverse effects** No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** Harmful to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea	M-Factor	M-Factor (long-term)
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine 100545-48-0	EL50 (72h) >100 mg/L Algae (Pseudokirchneriella subcapitata)	LL50 (96h) >10mg/L (Onchohynchus mykiss)	-	EL50 (48h) >10mg/L Daphnia (Daphnia magna)		
Trimethoxyvinylsilane 2768-02-7	EC 50 (72h) > 957 mg/l (Desmodesmus subspicatus) EU Method C.3	LC50 (96h) = 191 mg/l (Oncorhynchus mykiss)	-	EC50(48hr) 168.7mg/l (Daphnia magna)		
Titanium dioxide 13463-67-7	LC50 (96h) >10000 mg/l (Cyprinodon variegatus) OECD 203	-	-	-		
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate 52829-07-9	EC50 72Hr 0.705 mg/l (Pseudokirchneriella subcapitata)	LC50 (96h) = 5.29 mg/l (Oryzias latipes)	-	LC50 48Hr 8.58 mg/l (Daphnia magna)		
3-aminopropyltriethoxy silane 919-30-2	EC50 (72h) >1000 mg/L Green algae (desmodesmus subspicatus) (OECD TG 201)	LC50 (96h) >934 mg/L (Brachydanio rerio) (OECD TG 203)	-	EC50 (48h) =331 mg/L Daphnia magna (OECD TG 202)		
Diocetyl tin oxide 870-08-6	EC50 (3hr) >1.000 mg/l (bacteria) (Activated Sludge, Respiration Inhibition Test)	LC50 (96hr) >0,09 mg/l (Brachydanio rerio (zebra)) (Acute Toxicity Test)	-	EC50 (48Hr) >0,21 mg/l (Daphnia magna (Daphnia magna)) (Daphnia sp. Acute Immobilisation Test)		
N-(3-(trimethoxysilyl)propyl)ethylenediamine 1760-24-3	-	LC50 (96H) =597 mg/L (Danio)	-	EC50 (48h) =81mg/L Daphnia magna		

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		erio)Semi-static		Static		
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## 12.2. Persistence and degradability

**Persistence and degradability** No information available.

Trimethoxyvinylsilane (2768-02-7)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	28 days	BOD	51 % Not readily biodegradable

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate (52829-07-9)

Method	Exposure time	Value	Results
OECD Test No. 303: Simulation Test - Aerobic Sewage Treatment -- A: Activated Sludge Units; B: Biofilms	28 days	Total organic carbon (TOC)	24 % Moderate

Diocetyl tin oxide (870-08-6)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	755 hours	biodegradation	Not readily biodegradable 2 %

## 12.3. Bioaccumulative potential

**Bioaccumulation**

### Component Information

Chemical name	Partition coefficient
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	5.86
Trimethoxyvinylsilane	1.1
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	0.35
3-aminopropyltriethoxysilane	1.7
Diocetyl tin oxide	6
N-(3-(trimethoxysilyl)propyl)ethylenediamine	-0.3

## 12.4. Mobility in soil

**Mobility in soil** No information available.

## 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment** No information available.

Chemical name	PBT and vPvB assessment
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	The substance is not PBT / vPvB
Trimethoxyvinylsilane	The substance is not PBT / vPvB
Titanium dioxide	The substance is not PBT / vPvB PBT assessment does not apply
Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	The substance is not PBT / vPvB
3-aminopropyltriethoxysilane	The substance is not PBT / vPvB
Diocetyl tin oxide	The substance is not PBT / vPvB
N-(3-(trimethoxysilyl)propyl)ethylenediamine	The substance is not PBT / vPvB

## 12.6. Endocrine disrupting properties

**Endocrine disrupting properties** No information available.

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## 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Waste from residues/unused products</b>	Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.
<b>Contaminated packaging</b>	Handle contaminated packages in the same way as the product itself.
<b>European Waste Catalogue</b>	08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09
<b>Other information</b>	Waste codes should be assigned by the user based on the application for which the product was used.

## SECTION 14: Transport information

### Land transport (ADR/RID)

14.1 UN number or ID number	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

### IMDG

14.1 UN number or ID number	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Marine pollutant	NP
14.6 Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	Not applicable

### Air transport (ICAO-TI / IATA-DGR)

14.1 UN number or ID number	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

## Section 15: REGULATORY INFORMATION

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

#### European Union

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

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## Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

### **SVHC: Substances of Very High Concern for Authorisation:**

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

### **EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Chemical name	CAS No	Restricted substance per REACH Annex XVII
Diocetyl tin oxide	870-08-6	20.

### **Substance subject to authorisation per REACH Annex XIV**

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

### **Export Notification requirements**

This product contains substances which are regulated pursuant to Regulation (EC) No. 649/2012 of the European parliament and of the council concerning the export and import of dangerous chemicals

Chemical name	European Export/Import Restrictions per (EC) 689/2008 - Annex Number
Diocetyl tin oxide - 870-08-6	1.1

### **Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

### **Persistent Organic Pollutants**

Not applicable

## National regulations

### France

### Germany

#### **Ordinance on Industrial Safety and Health - Germany - BetrSichV**

No flammable liquids in accordance with BetrSichV

**Water hazard class (WGK)** slightly hazardous to water (WGK 1)

### Netherlands

#### **List of Carcinogenic, mutagenic and reproductive toxin substances in accordance with Inspectorate SZW (Netherlands)**

Not Listed

### Denmark

**Registration number(s) (P-no.)** No information available

### Norway

**Registration number(s) (PRN-no.)** No information available

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## 15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at >10 tpa. No Chemical Safety Assessment has been carried out for this mixture.

## SECTION 16: Other information

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Full text of H-Statements referred to under section 3

H226 - Flammable liquid and vapour  
H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H332 - Harmful if inhaled  
H335 - May cause respiratory irritation  
H361f - Suspected of damaging fertility  
H400 - Very toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects

#### Notes relating to the identification, classification and labelling of substances

**Note V:** If the substance is to be placed on the market as fibres (with diameter < 3 µm, length > 5 µm and aspect ratio ≥ 3:1) or particles of the substance fulfilling the WHO fibre criteria or as particles with modified surface chemistry, their hazardous properties must be evaluated in accordance with Title II of this Regulation, to assess whether a higher category (Carc. 1B or 1A) and/or additional routes of exposure (oral or dermal) should be applied

**Note W:** It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung

#### Notes relating to the classification and labelling of mixtures

**Note 10:** The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm

SVHC: Substances of Very High Concern for Authorisation:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals

vPvB: Very Persistent and very Bioaccumulative (vPvB) Chemicals

STOT RE: Specific target organ toxicity - Repeated exposure

STOT SE: Specific target organ toxicity - Single exposure

EWC: European Waste Catalogue

LOW: List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IATA: International Air Transport Association

ICAO: ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air

IMDG: International Maritime Dangerous Goods

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

#### Legend SECTION 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
AGW	Occupational exposure limit value	BGW	Biological limit value
Ceiling	Maximum limit value	*	Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method

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Respiratory sensitisation	Calculation method
Skin sensitisation	On basis of test data
mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

## Key literature references and sources for data used to compile the SDS

European Food Safety Authority (EFSA)  
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
NIOSH (National Institute for Occupational Safety and Health)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set

**Prepared By** Product Safety & Regulatory Affairs  
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**Revision note** SDS sections updated 3 11 12 16  
**Training Advice** No information available  
**Further information** No information available

## Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

**End of Safety Data Sheet**