



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: REACH Regulation (EC) No 1907/2006, as retained in UK law by (SI 2019/758 as amended)

**BOSTIK FIRESEAL FP403 HYBRID WHITE**  
Supersedes date 15-Nov-2024

Revision date 21-Nov-2024  
Revision Number 6.04

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

### 1.1. Product identifier

Product Name BOSTIK FIRESEAL FP403 HYBRID WHITE

Pure substance/mixture Mixture

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

Recommended use Sealant

Uses advised against Not to be used in articles intended for direct or prolonged skin contact Not to be used in production of toys or childcare articles Fabrics, textiles and apparel: bedding and clothing Gloves Footwear (shoes, boots) Paper products: tissue, towels, disposable dinnerware, nappies, feminine hygiene products, adult incontinence products, writing paper

Reason why uses advised against Restricted substance per REACH Annex XVII

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

#### Company Name

Bostik Limited  
Common Rd  
ST16 3EH  
Stafford UK  
Tel: +44 (1785) 27 26 25  
Fax: +44 (1785) 25 72 36

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

### 1.4. Emergency telephone number

United Kingdom Bostik: +44 (1785) 272650 (9am to 5pm Mon-Fri)  
NHS: 111

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

GB CLP (SI 2020/1567 as amended)

Skin sensitisation	Category 1 - (H317)
Hazardous to the aquatic environment - chronic	Category 3 - (H412)

### 2.2. Label elements

Contains Trimethoxyvinylsilane; Dioctyltinbis(acetylacetonate); N-(3-(trimethoxysilyl)propyl)ethylenediamine; Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate; N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine

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**Signal word**  
Warning

## Hazard statements

H317 - May cause an allergic skin reaction.  
H412 - Harmful to aquatic life with long lasting effects.

## EU Specific Hazard Statements

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

## Precautionary Statements - EU (§28, 1272/2008)

P101 - If medical advice is needed, have product container or label at hand  
P102 - Keep out of reach of children  
P261 - Avoid breathing vapours  
P280 - Wear protective gloves and eye/face protection  
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap  
P501 - Dispose of contents/ container to an approved waste disposal plant

## 2.3. Other hazards

Small amounts of methanol (CAS 67-56-1) 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	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	Notes
Titanium dioxide 13463-67-7	1 - <5	01-2119489379 -17-XXXX	236-675-5 (022-006-00-2)	[C]	-	-	-	V,W,10
Trimethoxyvinylsilane 2768-02-7	1 - <2.5	01-2119513215 -52-XXXX	220-449-8 (014-049-00-0)	Acute Tox. 4 (H332) Skin Sens. 1B (H317) Flam. Liq. 3 (H226)	-	-	-	-
Diocetyl tinbis(acetylate) 54068-28-9	0.1- <1	01-0000020199 -67-XXXX	483-270-6	STOT SE 2 (H371) Skin Sens. 1 (H317)	Skin Sens. 1 :: C>=5%	-	-	-
N-(3-(trimethoxysilyl)propyl)ethylenediamine	0.1- <1	01-2119970215 -39-XXXX	217-164-6	Eye Dam. 1 (H318) Skin Sens. 1 (H317)	-	-	-	-

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1760-24-3				Acute Tox. 4 (H332) STOT SE 3 (H335)				
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate 1065336-91-5	0.1 - <0.5	01-2119491304-40-XXXX	915-687-0	Skin Sens. 1A (H317) Repr. 2 (H361f) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	1	1	-
N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine 3069-29-2	0.1 - <0.3	01-2119963926-21-xxxx	221-336-6	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1A (H317)	-	-	-	-

Substances identified by a number starting "RR-" in the CAS-field are substances for which the CAS# is not adopted in EU and we use an internal numbering system to track within our SDS software

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

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

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. This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation.

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.

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

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

Chemical name	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	REACH registration number
Methyl alcohol 67-56-1	200-659-6 (603-001-00-X)	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

## 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

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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
Titanium dioxide	236-675-5 (022-006-00-2)	13463-67-7	-	-	-	-	-
Trimethoxyvinylsilane	220-449-8 (014-049-00-0)	2768-02-7	-	-	-	11	-
Diocetylbinbis(acetylacetonate)	483-270-6	54068-28-9	-	-	-	-	-
N-(3-(trimethoxysilyl)propyl)ethylenediamine	217-164-6	1760-24-3	-	-	1.5	-	-
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	1065336-91-5	-	-	-	-	-
N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine	221-336-6	3069-29-2	500	-	-	-	-

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)

## 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>	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor.
<b>Ingestion</b>	Small amounts of toxic methanol are released by hydrolysis. Call a doctor immediately. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water.

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

<b>Symptoms</b>	None known.
<b>Effects of Exposure</b>	No information available.

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

<b>Note to doctors</b>	Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released, when the product is exposed to moisture or water. Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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**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>). Nitrogen oxides (NO<sub>x</sub>). Silicon dioxide.

## **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** Prevent further leakage or spillage if safe to do so.

**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**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse.

**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** Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture. Keep away from food, drink and animal feedingstuffs.

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**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 This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product

Chemical name	European Union	United Kingdom
Limestone 1317-65-3	-	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>
Titanium dioxide 13463-67-7	-	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> *	TWA: 200 ppm TWA: 266 mg/m <sup>3</sup> STEL: 250 ppm STEL: 333 mg/m <sup>3</sup> Sk*
Diocetyltnbis(acetylacetonate) 54068-28-9	-	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.2 mg/m <sup>3</sup> Sk*

Chemical name	European Union	Ireland	United Kingdom
Methyl alcohol 67-56-1	-	15 mg/L (urine - Methanol end of shift)	-

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

#### Derived No Effect Level (DNEL)

##### Titanium dioxide (13463-67-7)

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Local health effects	Inhalation	10 mg/m <sup>3</sup>	

##### Trimethoxyvinylsilane (2768-02-7)

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	

##### Diocetyltnbis(acetylacetonate) (54068-28-9)

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Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects worker	Dermal	0.07 mg/kg bw/d	
Long term Systemic health effects worker	Inhalation	84 mg/m <sup>3</sup>	
Short term Systemic health effects worker	Inhalation	84 mg/m <sup>3</sup>	
Long term Short term Local health effects worker	Inhalation	0.091 mg/m <sup>3</sup>	

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

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

## **Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)**

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	1.27 mg/m <sup>3</sup>	
worker Systemic health effects Long term	Dermal	1.8 mg/kg	

## **N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine (3069-29-2)**

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	12 mg/m <sup>3</sup>	
worker Long term Systemic health effects	Dermal	1.7 mg/kg bw/d	

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

### **Titanium dioxide (13463-67-7)**

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Oral	700 mg/kg bw/d	

### **Trimethoxyvinylsilane (2768-02-7)**

Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer	Inhalation	18,9 mg/m <sup>3</sup>	

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

<b>Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	0.31 mg/m <sup>3</sup>	
Consumer Long term Systemic health effects	Dermal	0.9 mg/kg	
Consumer Long term Systemic health effects	Oral	0.18 mg/kg	

<b>N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine (3069-29-2)</b>			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	2.9 mg/m <sup>3</sup>	
Consumer Long term Systemic health effects	Dermal	0.83 mg/kg bw/d	
Consumer Long term Systemic health effects	Oral	0.83 mg/kg bw/d	

## Predicted No Effect Concentration (PNEC)

<b>Predicted No Effect Concentration (PNEC)</b>	
<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



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Microorganisms in sewage treatment	100 mg/l
Freshwater - intermittent	0.193 mg/l

<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>Diocetyl tinbis(acetylacetonate) (54068-28-9)</b>	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	26 µg/l
Marine water	2.6 µg/l
Freshwater - intermittent	260 µg/l
Sewage treatment plant	1 mg/l
Freshwater sediment	0.155 mg/kg dry weight
Marine sediment	0.0155 mg/kg dry weight
Soil	0.0158 mg/kg dry weight

<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
Sewage treatment plant	25 mg/l

<b>Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.0022 mg/l
Marine water	0.00022 mg/l
Freshwater - intermittent	0.009 mg/l
Freshwater sediment	1.05 mg/kg
Marine sediment	0.11 mg/kg
Soil	0.21 mg/kg
Sewage treatment plant	1 mg/l

<b>N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine (3069-29-2)</b>	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.062 mg/l
Marine water	0.006 mg/l
Sewage treatment plant	25 mg/l
Freshwater sediment	0.24 mg/kg dry weight
Marine sediment	0.024 mg/kg dry weight
Soil	0.01 mg/kg dry weight

## 8.2. Exposure controls

### Engineering controls

Ensure adequate ventilation, especially in confined areas.

### Personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.

#### Hand protection

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

#### Skin and body protection

None under normal use conditions.

#### Respiratory protection

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.

#### Recommended filter type:

Organic gases and vapours filter conforming to EN 14387. White. Brown.

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**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

Physical state	Solid
Appearance	Paste
Colour	See section 1 for more information
Odour	Characteristic.

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	> 60 °C	
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	.	
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	> 21 mm <sup>2</sup> /s	
Dynamic viscosity	No data available	
Water solubility	Reacts with water. Product cures with moisture	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	1.48	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

### 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.
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### 10.2. Chemical stability

Stability	Stable under normal conditions.
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## Explosion data

Sensitivity to mechanical impact  
Sensitivity to static discharge

None.  
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 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 May cause sensitisation by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).

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

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

Symptoms Itching. Rashes. Hives.

#### Acute toxicity

#### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) >2000 mg/kg  
ATEmix (dermal) >2000 mg/kg  
ATEmix (inhalation-gas) >20000 ppm  
ATEmix (inhalation-dust/mist) >5 mg/l  
ATEmix (inhalation-vapour) 933.50 mg/l

#### Component Information

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Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium dioxide	>10000 mg/kg (Rattus)	LD50 > 5000 mg/Kg	= 5.09 mg/L ( Rattus ) 4 h
Trimethoxyvinylsilane	LD50 = 7120 -7236 mg/kg (Rattus) OECD 401	= 3540 mg/kg (Oryctolagus cuniculus)	LC50 (4hr) 16.8 mg/l (Rattus) OECD TG 403
Diocetylbinbis(acetylacetonate)	LD50 =2500 mg/kg (Rattus)	LD50 >2000 mg/kg (Rattus)	= 5.1 mg/L ( Rat ) 4 h
N-(3-(trimethoxysilyl)propyl)ethylenediamine	=2295 mg/kg (Rattus)	>2000 mg/Kg (Rattus)	LC50 4H (Aerosol)1.5 - 2.44 mg/L air
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	LD50 = 3230 mg/Kg (Rattus) (OECD 401)	LD50 >3170 mg/Kg (Rattus) (OECD 402)	-
N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine	=200 - 2000 mg/Kg (Rattus) (OECD 401)	>5000 mg/Kg (Oryctolagus cuniculus) (OECD 402)	> 5.2 mg/L ( Rattus ) 4 h (OECD 403)

## 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.

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

Trimethoxyvinylsilane (2768-02-7)					
Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal	0.5 mL	24 hours	Non-irritant

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)					
Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit				Mild skin irritant

### **Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

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

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

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)					
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** May cause an allergic skin reaction.

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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

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)		
Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	Mammalian cells in vitro	Negative
OECD Test No. 476: In Vitro Mammalian Cell Gene Mutation Tests using the Hprt and xprt genes	Mammalian cells in vitro	Negative

## Carcinogenicity

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

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
Titanium dioxide	Carc. 2

## Reproductive toxicity

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

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

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)		
Method	Species	Results
OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test	Rat Oral	NOAEL >500 mg/Kg

## STOT - single exposure

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

## 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

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)					
Method	Species	Exposure route	Effective dose	Exposure time	Results

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OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developme ntal Toxicity Screening Test	Rat	Sub-acute oral toxicity gavage		28 days	NOAEL >500 mg/kg
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**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 with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea	M-Factor	M-Factor (long-term)
Titanium dioxide 13463-67-7	LC50 (96h) >10000 mg/l (Cyprinodon variegatus) OECD 203	-	-	-		
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)		
Diocetyl tinbis(acetylacet onate) 54068-28-9	-	LC50 (96h) =86 mg/L (Static)	-	EC50 (48h) =58.6 mg/L (Daphnia magna)		
N-(3-(trimethoxysilyl)pr opyl)ethylenediamine 1760-24-3	-	LC50 (96H) =597 mg/L (Danio rerio)Semi-static	-	EC50 (48h) =81mg/L Daphnia magna Static		
Reaction mass of Bis(1,2,2,6,6-pentamet hyl-4-piperidyl)pr opyl)sebacate and Methyl 1,2,2,6,6-pentamethyl- 4-piperidyl sebacate 1065336-91-5	EC50 (72h): 1.68 mg/l (Desmodesmus subspicatus) OECD 201	LC50 (96h): 0.9 mg/L (Brachydanio rerio) OECD 203	EC20 (3h)>= 100 mg/l OECD 209	-	1	1

### 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	28 days	BOD	51 % Not readily

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Biodegradability: Manometric Respirometry Test (TG 301 F)			biodegradable
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## 12.3. Bioaccumulative potential

### Bioaccumulation

#### Component Information

Chemical name	Partition coefficient
Trimethoxyvinylsilane	1.1
N-(3-(trimethoxysilyl)propyl)ethylenediamine	-0.3
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	2.77

## 12.4. Mobility in soil

**Mobility in soil** No information available.

## 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment** The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

Chemical name	PBT and vPvB assessment
Titanium dioxide	The substance is not PBT / vPvB
Trimethoxyvinylsilane	The substance is not PBT / vPvB
Diocetyl tinbis(acetylacetonate)	The substance is not PBT / vPvB
N-(3-(trimethoxysilyl)propyl)ethylenediamine	The substance is not PBT / vPvB
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	The substance is not PBT / vPvB
N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine	The substance is not PBT / vPvB

## 12.6. Endocrine disrupting properties

**Endocrine disrupting properties** No information available.

## 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 09* waste adhesives and sealants containing organic solvents or other dangerous substances
<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)

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14.1 UN number or ID number Not regulated  
14.2 UN 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 precautions for user  
Special Provisions None

## IMDG

14.1 UN number or ID number Not regulated  
14.2 UN 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 precautions for user  
Special Provisions None  
14.7 Maritime transport in bulk  
according to IMO instruments  
Transport in bulk according to Annex II of MARPOL and the IBC Code Not applicable

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

14.1 UN number or ID number Not regulated  
14.2 UN 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 precautions for user  
Special Provisions None

## Section 15: REGULATORY INFORMATION

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

#### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

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

#### Registration, Evaluation, Authorisation, 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 bis(acetylacetonate)	54068-28-9	Use restricted. See entry 20.

20 (6) DOT.

#### 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)



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## 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 above the level that triggers a labeling obligation under Regulation (EC) No 1272/2008.

**Therefore this product is subject to prior informed consent notification .**

Chemical name	European Export/Import Restrictions per (EC) 649/2012 - Annex Number
Dioctyltinbis(acetylacetonate) - 54068-28-9	I.1

## Ozone-depleting substances (ODS) Regulation (EU) 2024/590

Not applicable

## Persistent Organic Pollutants

Not applicable

## REGULATION (EU) 2019/1148 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019 on the marketing and use of explosives precursors

Not applicable

## National regulations

### 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 any hazard and/or precautionary statements referred to under Sections 2-15

H226 - Flammable liquid and vapour

H302 - Harmful if swallowed

H315 - Causes skin irritation

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

H371 - May cause damage to organs

H400 - Very toxic to aquatic life

H410 - Very 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. This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation

#### **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

#### **Legend**

TWA

TWA (time-weighted average)

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STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value
Sk*	Skin designation
SVHC	Substance(s) of Very High Concern
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
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
RID	Regulations concerning the International Transport of Dangerous Goods by Rail

## Key literature references and sources for data

No information available

**Prepared By** Product Safety & Regulatory Affairs  
**Revision date** 21-Nov-2024

## Indication of changes

<b>Revision Note</b>	Not applicable.
<b>Training Advice</b>	No information available
<b>Further information</b>	No information available

**This SDS complies with the requirements of UK REACH Regulations SI 2019/758 (as amended)**

## 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**