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

1.1. Product identifier

Product Name BOSTIK FIRESEAL FP403 HYBRID WHITE

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 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

Signal word

Warning

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

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
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. (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	[C]	-	-	-	-
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)	-	-	-	-
Dioctyltinbis(acetylacetonate) 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 1760-24-3	0.1- <1	01-2119970215-39-XXXX	217-164-6	Acute Tox. 4 (H332) Eye Dam. 1 (H318) Skin Sens. 1 (H317) STOT RE 2 (H373)	-	-	-	-
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	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	-

1065336-91-5								
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

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

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. (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	13463-67-7	-	-	-	-	-
Trimethoxyvinylsilane	220-449-8 (014-049-00-0)	2768-02-7	-	-	-	11	-
Dioctyltinbis(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 >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. If medical advice is needed, have product container or label at hand.

Inhalation Remove to fresh air. If symptoms persist, call a doctor.

Eye contact 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.

Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	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

Symptoms	None known.
Effects of Exposure	No information available.

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

Note to doctors	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.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Water spray, carbon dioxide (CO2), 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 (CO2). Nitrogen oxides (NOx). 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 Residues which cannot be recycled are disposed of as chemical waste. Equipment cleaned with organic solvent, washings are collected and disposed of as solvent waste. Collect water from cleaning tools and reuse it or dispose it in local sewage systems. Do not spill water or dispose cleaning water into the environment.

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.

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/m³; inhalable dust TWA: 4 mg/m³; respirable dust STEL: 30 mg/m³; inhalable dust STEL: 12 mg/m³; respirable dust
Carbonic acid, calcium salt (1:1) 471-34-1	-	TWA: 10 mg/m³; inhalable dust TWA: 4 mg/m³; respirable dust STEL: 30 mg/m³; inhalable dust STEL: 12 mg/m³; respirable dust
Titanium dioxide 13463-67-7	-	TWA: 10 mg/m³; total inhalable TWA: 4 mg/m³; respirable STEL: 30 mg/m³; total inhalable STEL: 12 mg/m³; respirable
Methyl alcohol 67-56-1	TWA: 200 ppm; TWA: 260 mg/m³; pSk	TWA: 200 ppm; TWA: 266 mg/m³; STEL: 250 ppm; STEL: 333 mg/m³;

		pSk
Magnesium carbonate 546-93-0	-	TWA: 10 mg/m³; inhalable dust TWA: 4 mg/m³; respirable dust STEL: 30 mg/m³; inhalable dust STEL: 12 mg/m³; respirable dust
Dioctyltinbis(acetylacetonate) 54068-28-9	-	TWA: 0.1 mg/m³; STEL: 0.2 mg/m³; pSk

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/m³	

Trimethoxyvinylsilane (2768-02-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Systemic health effects Long term	Inhalation	27,6 mg/m³	
worker Systemic health effects Long term	Dermal	3,9 mg/kg bw/d	

Dioctyltinbis(acetylacetonate) (54068-28-9)			
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/m³	
Short term Systemic health effects worker	Inhalation	84 mg/m³	
Long term Short term Local health effects worker	Inhalation	0.091 mg/m³	

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/m³	
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/m³	
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/m³	
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 Systemic health effects Long term	Inhalation	18,9 mg/m³	
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	

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)			
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/m³	
Consumer Systemic health effects Long term	Dermal	2.5 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
Consumer	Inhalation	0.31 mg/m³	

Long term Systemic health effects			
Consumer Long term Systemic health effects	Dermal	0.9 mg/kg	
Consumer Long term Systemic health effects	Oral	0.18 mg/kg	

N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine (3069-29-2)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	2.9 mg/m³	
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)

Predicted No Effect Concentration (PNEC)	
Titanium dioxide (13463-67-7)	
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

Trimethoxyvinylsilane (2768-02-7)	
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

Dioctyltinbis(acetylacetonate) (54068-28-9)	
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

N-(3-(trimethoxysilyl)propyl)ethylenediamine (1760-24-3)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.062 mg/l
Marine water	0.0062 mg/l
Sewage treatment plant	25 mg/l

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)	
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

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

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	No data available	Not applicable.
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	> 21 mm²/s	
Dynamic viscosity	No data available	None known

Water solubility	Insoluble in water. Product cures with moisture		Reacts with water
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		
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		28.4 g/L

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 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 ATE values have been calculated for the mixture

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)	933.40 mg/L

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium dioxide	> 5000 mg/kg (Rattus) OECD 425	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
Dioctyltinbis(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.

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.

Component Information		
Titanium dioxide (13463-67-7)		
Method	**Species**	**Results**
Oral	Rat	Not Carcinogenic

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

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

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)		
Dioctyltinbis(acetylacetonate) 54068-28-9	-	LC50 (96h) =86 mg/L (Static)	-	EC50 (48h) =58.6 mg/L (Daphnia magna)		
N-(3-(trimethoxysilyl)propyl)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-pentamethyl-4-piperidyl) 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 Biodegradability: Manometric Respirometry Test (TG 301 F)	28 days	BOD	51 % Not readily biodegradable

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

Chemical name	PBT and vPvB assessment

Titanium dioxide	Not PBT/vPvB
Trimethoxyvinylsilane	Not PBT/vPvB
Dioctyltinbis(acetylacetonate)	Not PBT/vPvB
N-(3-(trimethoxysilyl)propyl)ethylenediamine	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	Not PBT/vPvB
N-[3-(Dimethoxymethylsilyl)propyl]-ethylenediamine	Not PBT/vPvB

12.6. Endocrine disrupting properties Endocrine disrupting properties

Endocrine disruption for the environment Based on available data, the classification criteria are not met.

12.7. Other adverse effects Other adverse effects

Other adverse effects No information available.
PMT or vPvM properties Based on available data, the classification criteria are not met.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Contaminated packaging Handle contaminated packages in the same way as the product itself.

European Waste Catalogue 08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances

Other information 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 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 >=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
Dioctyltinbis(acetylacetonate)	54068-28-9	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)

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 (EC) 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

Regulations on drug precursors (EC) No 111/2005 (export) and 273/2004 (internal trade)
This product does not contain any substance(s) on the Drug Precursors list.

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
H361f - Suspected of damaging fertility
H371 - May cause damage to organs
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Legend

TWA	TWA (time-weighted average)
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	23-Jun-2026

Indication of changes

Revision Note	Not applicable.
Training Advice	No information available
Further information	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