

High Modulus Modified Polymer Sealant

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name

High Modulus Modified Polymer Sealant

Product description

Sealants Adhesive.

Other means of identification

Not available.

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

Identified uses

Sealants Adhesive.

Uses advised against

For professional use only.

1.3. Details of the supplier of the safety data sheet

Supplier

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

Tel. 01724 864 100

e-mail address of person responsible for this SDS

E: sds.carlisle@ccm-europe.com

1.4. Emergency telephone number

National advisory body/Poison Centre**Telephone number**

National Poisons Information Service (NPIS)
Tel: 0344 892 0111 (for healthcare professionals only)

Website: <http://www.npis.org/>

Members of Public in England, Scotland and Wales can contact NHS 111/NHS 24 by dialling 111.

In Northern Ireland contact your local GP.

Supplier**Telephone number**

+44 (0)1773 826661

(Office hours: 8.30 - 17.00)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Product definition

Mixture

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Classification according to UK CLP/GHS

Physical hazards

Eye Irrit. 2, H319

Skin Sens. 1, H317

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended. See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2. Label elements

Hazard pictograms



Signal word

Warning

Hazard statements

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

Precautionary statements

Prevention Response

P280 - Wear protective gloves. Wear eye or face protection.

P362 + P364 - Take off contaminated clothing and wash it before reuse.

P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.

P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage

Not applicable.

Disposal

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings

Not applicable.

Tactile warning of danger

Not applicable.

2.3. Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

This mixture contains substances that are assessed to be a PBT or a vPvB, refer to section 3.2.

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Other hazards which do not result in classification
Curing process releases a small amount of methanol.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Mixture

Product/Ingredient name	Identifiers	%	Classification	Type
trimethoxyvinylsilane	REACH #: 01-2119513215-52 EC: 220-449-8 CAS: 2768-02-7 Index: 014-049-00-0	≤3	Acute Tox. 4, H332 Eye Irrit. 2, H319 Skin Sens. 1B, H317	[1]
N-(3-(trimethoxysilyl)propyl) ethylenediamine	REACH #: 01-2119970215-39 EC: 217-164-6 CAS: 1760-24-3	<3	Acute Tox. 4, H332 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT RE 2, H373 (respiratory tract) (inhalation)	[1]
titanium dioxide	EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2	≤1	Not classified.	[2]
dioctylbis(pentane-2,4-dionato-O, O')tin	REACH #: 01-0000020199-67 EC: 483-270-6 CAS: 54068-28-9	<1	Skin Sens. 1, H317 STOT SE 2, H371 (immune system) (oral)	[1] [2]
carbon black, non respirable	EC: 215-609-9 CAS: 1333-86-4	≤1	Not classified.	[2]
bumetrizole	REACH #: 01-2119971796-18 EC: 223-445-4 CAS: 3896-11-5	<1	Not classified.	[3]
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	REACH #: 01-2119537297-32 EC: 258-207-9 CAS: 52829-07-9	<1	Eye Dam. 1, H318 Repr. 2, H361f Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411	[1]
methanol	EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	<0.1	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370 See Section 16 for the full text of the H statements declared above.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are

PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for vPvB

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first aiders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

Eye contact

Adverse symptoms may include the following:

pain or irritation
watering

redness

Inhalation

No specific data.

Skin contact

Adverse symptoms may include the following:

irritation

redness

Ingestion

No specific data.

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

Notes for the physician

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

No specific data.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known.

5.2. Special hazards arising from the substance or mixture

Hazards from the substance or mixture

No specific fire or explosion hazard.

Hazardous combustion products

Decomposition products may include the following materials:

carbon dioxide

carbon monoxide

nitrogen oxides

metal oxide/oxides

5.3. Advice for firefighters

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for firefighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For non-emergency personnel

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in “For non-emergency personnel”.

6.2. Environmental precautions

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, water ways, soil or air).

6.3. Methods and material for containment and cleaning up

Small spill

Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill

Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

6.4. Reference to other sections

Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

SECTION 7: HANDLING AND STORAGE

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1. Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin

sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2. Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3. Specific end use(s)

Recommendations

Not available.

Industrial sector specific solutions

Not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits

titanium dioxide

Exposure limit values

EH40/2005 WELs (United Kingdom (UK), 1/2020).

TWA: 4 mg/m³ 8 hours. Form: respirable

TWA: 10 mg/m³ 8 hours. Form: total inhalable

dioctylbis(pentane-2,4-dionato-O,O')tin

Exposure limit values

EH40/2005 WELs (United Kingdom (UK), 1/2020). [tin compounds, organic, except cyhexatin (ISO) as Sn] Absorbed through skin.

STEL: 0.2 mg/m³, (as Sn) 15 minutes.

TWA: 0.1 mg/m³, (as Sn) 8 hours.

carbon black, non respirable

Exposure limit values

EH40/2005 WELs (United Kingdom (UK), 1/2020).

STEL: 7 mg/m³ 15 minutes.

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TWA: 3.5 mg/m³ 8 hours.

methanol

Exposure limit values

EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.

STEL: 333 mg/m³ 15 minutes.

STEL: 250 ppm 15 minutes.

TWA: 266 mg/m³ 8 hours.

TWA: 200 ppm 8 hours.

Biological exposure indices No exposure indices known.

No exposure indices known.

Recommended monitoring procedures

Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ Ingredient name	Type	Exposure	Value	Population	Effects
trimethoxyvinylsilane	DNEL	Long term Oral	0.3 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3.9 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	6.7 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	7.8 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	27.6 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	26400 mg/ m ³	General population	Systemic
N-(3-(trimethoxysilyl) propyl) ethylenediamine	DNEL	Long term Inhalation	0.1 mg/m ³	General population	Local
	DNEL	Long term Inhalation	0.6 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	4 mg/m ³	General population	Local
	DNEL	Short term Inhalation	5.36 mg/m ³	Workers	Local
	DNEL	Long term Oral	8 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	50 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation Short term Inhalation	50 mg/m ³ 260 mg/m ³	General population Workers	Systemic Systemic

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Product/ Ingredient name	Type	Exposure	Value	Population	Effects
	DNEL	Long term Inhalation	260 mg/m ³	Workers	Systemic
dioctylbis(pentane-2,4- dionato-O, O')tin	DNEL	Long term Dermal	0.07 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	84 mg/m ³	Workers	Systemic
carbon black, non respirable	DNEL	Long term Inhalation	0.06 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	1 mg/m ³	Workers	Systemic
bis(2,2,6,6- tetramethyl-4- piperidyl) sebacate	DNEL	Long term Oral	0.18 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.31 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.9 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	1.27 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1.8 mg/kg bw/day	Workers	Systemic
methanol	DNEL	Short term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	Workers Workers	Systemic Systemic
	DNEL	Long term Dermal	20 mg/kg bw/day	General population	Local
	DNEL	Short term Inhalation	26 mg/m ³	General population	Local
	DNEL	Long term Inhalation	26 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	26 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	26 mg/m ³	General population	
	DNEL	Short term Inhalation	130 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	130 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	130 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	130 mg/m ³	Workers	Systemic

PNECS

Product/Ingredient name	Compartment Detail	Value	Method Detail
N-(3-(trimethoxysilyl)propyl) ethylenediamine	Fresh water	0.05 mg/l	-
	Fresh water	0.072 mg/l	-
	Marine water	0.005 mg/l	-
	Sewage Treatment Plant	20 mg/l	-
	Fresh water sediment	0.181 mg/kg	-
	Marine water sediment	0.018 mg/kg	-
dioctylbis(pentane-2,4-dionato-0,0')tin	Soil	0.007 mg/kg	-
	Fresh water	0.026 mg/l	-
	Fresh water	0.26 mg/l	-
	Marine water	0.003 mg/l	-
	Sewage Treatment Plant	1 mg/l	-
	Fresh water sediment	0.155 mg/kg	-
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Marine water sediment	0.015 mg/kg	-
	Soil	0.016 mg/kg	-
	Fresh water	0.004 mg/l	-
	Fresh water	0.007 mg/l	-
	Marine water	0.38 µg/l	-
	Sewage Treatment Plant	1 mg/l	-
	Fresh water sediment	5.9 mg/kg	-
	Marine water sediment	0.59 mg/kg	-
	Soil	1.18 mg/kg	-

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures

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

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1. Information on basic physical and chemical properties

Appearance

Solid. [paste]

Colour

Black.

Odour

Mild.

Odour threshold

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

Not available.

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Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits

Not applicable.

Flash point

Not applicable.

Auto-ignition temperature

400°C (752°F)

Decomposition Temperature

Not available.

pH

Not applicable.

Viscosity

Dynamic: 600000 to 1000000 mPa·s

Solubility(ies)

Media

cold water

Result

Not soluble

Solubility in water

Insoluble

Miscible with water

No.

Partition coefficient: n-octanol/water

Not applicable.

Vapour pressure

Not available.

Relative density

1.44 to 1.54

Vapour density

Not applicable.

Explosive properties

Not available.

Oxidising properties

Not available.

Particle characteristics

Median particle size

Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity

No specific test data related to reactivity available for this product or its ingredients.

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10.2. Chemical stability

The product is stable.

10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.
Curing process releases a small amount of methanol.

10.4. Conditions to avoid

Keep away from heat and direct sunlight.

10.5. Incompatible materials

No specific data

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product/Ingredient name	Result	Species	Dose	Exposure
trimethoxyvinylsilane	LC50 Inhalation Vapour	Rat	16.8 mg/l	4 hours
	LD50 Dermal	Rabbit - Female	3158 mg/kg	-
	LD50 Oral	Rat - Male, Female	6899 mg/kg	-
N-(3-(trimethoxysilyl)propyl) ethylenediamine	LD50 Oral	Rat	7340 uL/kg	-
	LC50 Inhalation Dusts and mists	Rat	1.49 mg/l	4 hours
dioctylbis(pentane-2,4-dionato-0,0')tin	LD50 Oral	Rat	2413 mg/kg	-
	LD50 Dermal	Rat	> 2000 mg/kg	-
	LD50 Oral	Rat	2500 mg/kg	-
carbon black, non respirable	LD50 Oral	Rat	>15400 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	500 mg/m ³	4 hours
	LD50 Dermal	Rat	3170 mg/kg	-
methanol	LD50 Oral	Rat	3700 mg/kg	-
	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-

Conclusion

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

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Acute toxicity estimates

Product/Ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
High Modulus Modified polymer Sealant	N/A	N/A	N/A	1183.1	104.9
trimethoxyvinylsilane	6899	3158	N/A	16.8	N/A
N-(3-(trimethoxysilyl)propyl)ethylenediamine	2413	N/A	N/A	N/A	1.49
dioctylbis(pentane-2,4-dionato-O,O')tin	2500	N/A	N/A	N/A	N/A
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	3700	3170	N/A	N/A	N/A
methanol	100	300	64000	3	N/A

Irritation/Corrosion

Product/Ingredient name	Result	Species	Score	Exposure	Observation
trimethoxyvinylsilane	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
N-(3-(trimethoxysilyl)propyl) ethylenediamine	Eyes - Severe irritant	Rabbit	-	15 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 ug l	-
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Eyes - Severe irritant	Rabbit	-	-	21 days
	Eyes - Moderate irritant	Rabbit	-	24 hours 100mg	-
methanol	Eyes - Moderate irritant	Rabbit	-	40mg 24 hours	-
	Skin - Moderate irritant	Rabbit	-	20mg	-

Conclusion/Summary

Skin

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

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Eyes

Eye Irrit. 2

Respiratory

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

Sensitisation

Product/Ingredient name	Route of exposure	Species	Result
N-(3-(trimethoxysilyl)propyl) ethylenediamine	Skin	Guinea pig	Sensitising
dioctylbis(pentane-2,4-dionato-0,0')tin	Skin	Mouse	Sensitising

Conclusion/Summary

Skin

Skin Sens. 1

Respiratory

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

Mutagenicity

Conclusion/Summary

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

Carcinogenicity

Conclusion/Summary

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

Reproductive toxicity

Conclusion/Summary

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

Teratogenicity

Conclusion/Summary

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

Specific target organ toxicity (single exposure)

Product/Ingredient name	Category	Route of exposure	Target organs
dioctylbis(pentane-2,4-dionato-0,0')tin	Category 2	oral	immune system
methanol	Category 1	-	-

Specific target organ toxicity (repeated exposure)

Product/Ingredient name	Category	Route of exposure	Target organs
N-(3-(trimethoxysilyl)propyl) ethylenediamine	Category 2	inhalation	respiratory tract

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Aspiration hazard

Not available.

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

Causes serious eye irritation.

Inhalation

No known significant effects or critical hazards.

Skin contact

May cause an allergic skin reaction.

Ingestion

No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

Adverse symptoms may include the following:

pain or irritation

watering

redness

Inhalation

No specific data.

Skin contact

Adverse symptoms may include the following:

irritation

redness

Ingestion

No specific data.

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

Short term exposure

Potential immediate effects

Irritating to eyes. Sensitisation

Potential delayed effects

Not available.

Long term exposure

Potential immediate effects

Not available.

Potential delayed effects

Not available.

Potential chronic health effects

Product/Ingredient name	Result	Species	Dose	Exposure
dioctylbis(pentane-2,4-dionato-O,O')tin	Sub-acute NOAEL Oral	Rat	1.8 mg/kg	7 days

Conclusion/Summary

Not available.

General

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Other information

Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Product/Ingredient name	Result	Species	Exposure
trimethoxyvinylsilane	Acute EC50 >89 mg/l Fresh water	Algae	72 hours
	Acute EC50 168.7 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 191 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
N-(3-(trimethoxysilyl)propyl) ethylenediamine	Acute EC50 8.8 mg/l Fresh water	Algae	72 hours
	Acute EC50 81 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 597 mg/l Fresh water	Fish - Brachydanio rerio	96 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - Daphnia magna	21 days
titanium dioxide	Acute LC50 3 mg/l Fresh water	Crustaceans - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 6.5 mg/l Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	48 hours
	Acute LC50 >1000000 µg/l Marine water	Fish - Mummichog - Fundulus heteroclitus	96 hours
	Acute EC50 37.563 mg/l Fresh water	Daphnia - Water flea - Daphnia magna - Neonate	48 hours
bumetrizole	Acute EC50 >100 mg/l Fresh water	Algae	72 hours
	Acute EC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >100	Fish - Danio rerio	96 hours

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Product/Ingredient name	Result	Species	Exposure
	mg/l Fresh water Chronic NOEC 10	Daphnia - Daphnia magna	21 days
	mg/l Fresh water Chronic NOEC 100	Fish - Zebra danio - Danio rerio - Juvenile (Fledgling, Hatchling, Weanling)	28 days
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	Acute EC50 0.705 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 8.58 mg/l Fresh water	Daphnia - Daphnia magna Fish - Lepomis macrochirus	48 hours
methanol	Acute LC50 4.4 mg/l Fresh water	Daphnia - Daphnia magna	96 hours
	Chronic NOEC 0.23 mg/l Fresh water	Algae - Green algae - Ulva pertusa	21 days
	Acute EC50 16.912 mg/l Marine water	Crustaceans - Common shrimp, sand shrimp - Crangon crangon - Adult	96 hours
	Acute LC50 2500000 µg/l Marine water	Daphnia - Water flea - Daphnia magna - Neonate	48 hours
	Acute LC50 3289 mg/l Fresh water	Fish - Zebra danio - Danio rerio - Egg	48 hours
	Acute LC50 290 mg/l Fresh water	Algae - Green algae - Ulva pertusa	96 hours
	Chronic NOEC 9.96 mg/l Marine water		96 hours

Conclusion/Summary

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

12.2. Persistence and degradability

Product/Ingredient name	Test	Result	Dose	Inoculum
bumetrizole	-	10 % - Not readily - 28 days	-	-

Conclusion/summary

Not available.

Product/Ingredient name	Aquatic half-life	Photolysis	Biodegradability
N-(3-(trimethoxysilyl)propyl) ethylenediamine	-	-	Readily
bumetrizole	Fresh water >180 days, 20°C	-	Not readily
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	-	-	Not readily

12.3. Bioaccumulative potential

Product/Ingredient name	LogP _{ow}	BCF	Potential
bumetrizole	-	6356	high
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	0.35	-	low
methanol	-0.77	<10	low

12.4. Mobility in soil

Soil/water partition coefficient (KOC)

Not available.

Mobility

Not available.

12.5. Results of PBT and vPvB assessment

Product/Ingredient name	PBT	P	B	T	vPvB	vP	vB
trimethoxyvinylsilane	No	N/A	N/A	No	N/A	N/A	N/A
dioctylbis(pentane-2,4-dionato-O,O')tin	No	N/A	N/A	No	N/A	N/A	N/A
bumetrizole	No	Yes	Yes	No	Yes	Yes	Yes
methanol	No	No	No	No	No	N/A	No

12.6. Other adverse effects

No known significant effects or critical hazards.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste

Yes

Waste code

08 04 09*

Waste designation

waste adhesives and sealants containing organic solvents or other hazardous substances

Packaging

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

General information

For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

ADR/RID

Not regulated.

ADN

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

14.2. UN proper shipping name

ADR/RID

-

ADN

-

IMDG

-

IATA

-

14.3. Transport hazard class(es)

ADR/RID

-

ADN

-

IMDG

-

IATA

-

14.4. Packing group

ADR/RID

-

ADN

-

IMDG

-

IATA

-

14.5. Environmental hazards

ADR/RID

No

ADN

No

IMDG

No

IATA

No

14.6. Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not available.

SECTION 15: REGULATORY INFORMATION

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Part

Part 1

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Ingredient name

dioctyltin compounds

Status

Listed

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

Industrial emissions (integrated pollution prevention and control) -Air

Not listed.

Industrial emissions (integrated pollution prevention and control) -Water

Not listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia

Not determined.

Canada

Not determined.

China

Not determined.

Eurasian Economic Union Japan

Russian Federation inventory

Not determined.

Japan inventory (CSCL)

Not determined.

Japan inventory (ISHL)

Not determined.

New Zealand

Not determined.

Philippines

Not determined.

Republic of Korea

Not determined.

Taiwan

Not determined.

Thailand

Not determined.

Turkey

Not determined.

United States

Not determined.

Viet Nam

Not determined.

15.2. Chemical safety assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: OTHER INFORMATION

Indicates information that has changed from previously issued version.

Abbreviations and acronyms used in the safety data sheet

ATE = Acute Toxicity Estima

GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EUH statement = GB CLP-specific Hazard statement

N/A = Not available

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

SGG = Segregation Group

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification

Eye Irrit. 2, H319

Skin Sens. 1, H317

Justification

Calculation method

Calculation method

Full text of abbreviated H statements

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H317 May cause an allergic skin reaction.

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H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H361f Suspected of damaging fertility.
H370 Causes damage to organs.
H371 May cause damage to organs.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Full text of classifications

Acute Tox. 3

ACUTE TOXICITY - Category 3

Acute Tox. 4

ACUTE TOXICITY - Category 4

Aquatic Acute 1

SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1

Aquatic Chronic 2

LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

Eye Dam. 1

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

Eye Irrit. 2

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

Flam. Liq. 2

FLAMMABLE LIQUIDS - Category 2

Repr. 2

REPRODUCTIVE TOXICITY - Category 2

Skin Sens. 1

SKIN SENSITISATION - Category 1

Skin Sens. 1B

SKIN SENSITISATION - Category 1B

STOT RE 2

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 SPECIFIC TARGET ORGAN

STOT SE 1

TOXICITY - SINGLE EXPOSURE - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE

STOT SE 2

EXPOSURE - Category 2

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Date of issue/ Date of revision

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Date of previous issue

No previous validation

Version

1

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To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein we cannot guarantee that these are the only hazards that exist.