SAFETY DATA SHEET

Arbosil One

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

1.1 Product identifier

Product name : Arbosil One

Product description : Sealants

Other means of identification : Not available.

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

Identified uses
Sealants

Uses advised against	Reason
Use only for intended applications.	

1.3 Details of the supplier of the safety data sheet

CARLISLE®Adshead Ratcliffe & Co. Ltd
Unit 1, Park Lane Business Park, Park Lane , Kirkby-in-Ashfield, Nottingham, NG17 9GU, United Kingdom
T +44 (0)1623 627285

e-mail address of person responsible for this SDS : SDSQueries@carlisleccm.com

1.4 Emergency telephone number

National advisory body/Poison Center

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

Classification according to UK CLP/GHS

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 :



SECTION 2: Hazards identification

Signal word : Warning

Hazard statements : H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.

Precautionary statements

Prevention : P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response : P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
P362 - Take off contaminated clothing and wash before reuse.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage : Not applicable.

Disposal : Not applicable.

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 does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
Limestone	EC: 215-279-6 CAS: 1317-65-3	≥25 - ≤50	Not classified.	[2]
Silane, dichlorodimethyl-, reaction products with silica	REACH #: 01-2119379499-16 EC: 271-893-4 CAS: 68611-44-9	≤5	Not classified.	[2]
magnesium carbonate	EC: 208-915-9 CAS: 546-93-0	≤5	Not classified.	[2]
trimethoxyvinylsilane	REACH #: 01-2119513215-52 EC: 220-449-8 CAS: 2768-02-7 Index: 014-049-00-0	≤5	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Sens. 1B, H317	[1]
bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium	REACH #: 01-2119968551-31 EC: 281-161-6 CAS: 83877-91-2	<3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	[1]
2-methylpropan-1-ol	EC: 201-148-0 CAS: 78-83-1	≤0.1	Flam. Liq. 3, H226 Acute Tox. 4, H332	[1] [2]

SECTION 3: Composition/information on ingredients

methanol	Index: 603-108-00-1 EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	<0.1	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336 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]

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

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.

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.

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

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

SECTION 4: First aid measures

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 to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

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
halogenated compounds
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 fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.

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 spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized 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 : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials 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.

SECTION 6: Accidental release measures

Large spill : Move containers from spill area. Approach 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.

6.4 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 unlabeled 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

Product/ingredient name	Exposure limit values
Limestone	**EH40/2005 WELs (United Kingdom (UK), 1/2020) [limestone]** TWA 8 hours: 10 mg/m³. Form: total inhalable. TWA 8 hours: 4 mg/m³. Form: respirable. **EH40/2005 WELs (United Kingdom (UK), 1/2020) [calcium carbonate]** TWA 8 hours: 10 mg/m³. Form: inhalable dust. TWA 8 hours: 4 mg/m³. Form: Respirable dust.
Silane, dichlorodimethyl-, reaction products with silica	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** TWA 8 hours: 2.4 mg/m³. Form: Respirable dust. TWA 8 hours: 6 mg/m³. Form: inhalable dust.
magnesium carbonate	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** TWA 8 hours: 10 mg/m³. Form: inhalable dust. TWA 8 hours: 4 mg/m³. Form: Respirable dust.
2-methylpropan-1-ol	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** STEL 15 minutes: 231 mg/m³.

SECTION 8: Exposure controls/personal protection

	STEL 15 minutes: 75 ppm. TWA 8 hours: 154 mg/m³. TWA 8 hours: 50 ppm.
methanol	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin. STEL 15 minutes: 333 mg/m³. STEL 15 minutes: 250 ppm. TWA 8 hours: 266 mg/m³. TWA 8 hours: 200 ppm.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result
magnesium carbonate	**DNEL - General population - Short term - Oral** 7.23 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Oral** 7.23 mg/kg bw/day Effects: Systemic
trimethoxyvinylsilane	**DNEL - General population - Long term - Oral** 0.63 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Dermal** 0.63 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 0.91 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 6.8 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 27.6 mg/m³ Effects: Systemic **DNEL - General population - Short term - Inhalation** 54.4 mg/m³ Effects: Systemic **DNEL - Workers - Short term - Inhalation** 73.6 mg/m³ Effects: Systemic
bis(ethyl acetoacetato-O1',O3)bis (2-methylpropan-1-olato)titanium	**DNEL - General population - Long term - Oral** 22 mg/kg bw/day Effects: Systemic

SECTION 8: Exposure controls/personal protection

	DNEL - General population - Long term - Dermal 220 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 254 mg/m³ Effects: Systemic **DNEL - General population - Long term - Inhalation** 303 mg/m³ Effects: Systemic
2-methylpropan-1-ol	**DNEL - General population - Long term - Inhalation** 55 mg/m³ Effects: Local **DNEL - Workers - Long term - Inhalation** 310 mg/m³ Effects: Local
methanol	**DNEL - General population - Short term - Oral** 4 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Oral** 4 mg/kg bw/day Effects: Systemic **DNEL - General population - Short term - Dermal** 4 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Dermal** 4 mg/kg bw/day Effects: Systemic **DNEL - Workers - Short term - Dermal** 20 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 20 mg/kg bw/day Effects: Systemic **DNEL - General population - Short term - Inhalation** 26 mg/m³ Effects: Local **DNEL - General population - Long term - Inhalation** 26 mg/m³ Effects: Local **DNEL - General population - Short term - Inhalation** 26 mg/m³ Effects: Systemic **DNEL - General population - Long term - Inhalation** 26 mg/m³ Effects: Systemic **DNEL - Workers - Short term - Inhalation** 130 mg/m³ Effects: Local

SECTION 8: Exposure controls/personal protection

DNEL - Workers - Long term - Inhalation
130 mg/m³
Effects: Local

DNEL - Workers - Short term - Inhalation
130 mg/m³
Effects: Systemic

DNEL - Workers - Long term - Inhalation
130 mg/m³
Effects: Systemic

PNECs

Product/ingredient name	Result
trimethoxyvinylsilane	**Fresh water** 0.4 mg/l **Fresh water** 1.21 mg/l **Marine water** 0.04 mg/l **Fresh water sediment** 1.5 mg/kg dwt **Marine water sediment** 0.15 mg/kg dwt **Soil** 0.06 mg/kg dwt
bis(ethyl acetoacetato-O1',O3)bis (2-methylpropan-1-olato)titanium	**Fresh water** 0.1 mg/l **Fresh water** 1 mg/l **Marine water** 0.01 mg/l **Sewage Treatment Plant** 28 mg/l **Fresh water sediment** 0.082 mg/kg dwt **Marine water sediment** 0.0082 mg/kg dwt **Soil** 0.019 mg/kg dwt

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

SECTION 8: Exposure controls/personal protection

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 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

Physical state : Solid. [paste]

Color : Various

Odor : Characteristic.

Odor threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range : Not available.

Flammability (solid, gas) : Not available.

Upper/lower flammability or explosive limits : Not applicable.

Flash point : Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

pH : Not applicable.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): Not available.

SECTION 9: Physical and chemical properties

Solubility in water : Not available.

Miscible with water : No.

Partition coefficient: n-octanol/water : Not applicable.

Vapor pressure : Not available.

Evaporation rate : Not available.

Relative density : 1.34

Vapor density : Not applicable.

Explosive properties : Not available.

Oxidizing properties : Not available.

Particle characteristics

Median particle size : Not available.

9.2 Other information

Not available.

SECTION 10: Stability and reactivity

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

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.

10.4 Conditions to avoid : No specific data.

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
Silane, dichlorodimethyl-, reaction products with silica	**Rat - Oral - LD50** >5000 mg/kg **Rat - Inhalation - LC50 Vapor** 450 mg/m³ [4 hours] Toxic effects: Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Dyspnea Lung, Thorax, or Respiration - Other changes
magnesium carbonate	**Rat - Oral - LD50** 8000 mg/kg
trimethoxyvinylsilane	**Rat - Male - Oral - LD50** 6899 mg/kg **Rabbit - Female - Dermal - LD50** 3158 mg/kg **Rat - Inhalation - LC50 Vapor** 16.8 mg/l [4 hours]

SECTION 11: Toxicological information

bis(ethyl acetoacetato-O1',O3)bis (2-methylpropan-1-olato)titanium	**Rat - Oral - LD50** >2000 mg/kg
2-methylpropan-1-ol	**Rat - Oral - LD50** 2460 mg/kg **Rabbit - Dermal - LD50** 3400 mg/kg **Rat - Inhalation - LC50 Vapor** 19200 mg/m³ [4 hours]
methanol	**Rabbit - Dermal - LD50** 15800 mg/kg **Rat - Oral - LD50** 5600 mg/kg **Rat - Inhalation - LC50 Gas.** 64000 ppm [4 hours] **Rat - Inhalation - LC50 Gas.** 145000 ppm [1 hours]

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Arbosil One	N/A	N/A	N/A	521.2	N/A
magnesium carbonate	8000	N/A	N/A	N/A	N/A
trimethoxyvinylsilane	6899	3158	N/A	16.8	N/A
2-methylpropan-1-ol	2460	3400	N/A	19.2	N/A
methanol	100	300	64000	3	N/A

Skin corrosion/irritation

Product/ingredient name	Result
trimethoxyvinylsilane	**Rabbit - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Skin - Not irritant** Duration of treatment/exposure: 24 hours
methanol	**Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result

SECTION 11: Toxicological information

trimethoxyvinylsilane	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Eyes - Not irritant** OECD [Acute Eye Irritation/Corrosion] Duration of treatment/exposure: 24 hours
methanol	**Rabbit - Eyes - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 100 mg **Rabbit - Eyes - Moderate irritant** Amount/concentration applied: 40 mg **Rabbit - Eyes - Severe irritant** Amount/concentration applied: 0.1 Ml

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Product/ingredient name	Result
trimethoxyvinylsilane	**Guinea pig - skin** OECD [Skin Sensitization] Result: Sensitizing

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Product/ingredient name	Result
trimethoxyvinylsilane	**In vitro - Bacteria** OECD [Bacterial Reverse Mutation Test] Result: Negative

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

SECTION 11: Toxicological information

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
bis(ethyl acetoacetato-O1',O3)bis (2-methylpropan-1-olato)titanium	STOT SE 3, H335 (Respiratory tract irritation) STOT SE 3, H336 (Narcotic effects)
2-methylpropan-1-ol	STOT SE 3, H335 (Respiratory tract irritation) STOT SE 3, H336 (Narcotic effects)
methanol	STOT SE 1, H370

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

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 and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : 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.

SECTION 11: Toxicological information

Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
trimethoxyvinylsilane	**Acute - LC50 - Fresh water** Fish - *Oncorhynchus mykiss* 191 mg/l [96 hours] **Acute - EC50 - Fresh water** Daphnia - *Daphnia magna* 168.7 mg/l [48 hours] **Acute - EC50 - Fresh water** Algae >89 mg/l [72 hours]
2-methylpropan-1-ol	**Acute - LC50 - Fresh water** Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss* Weight: 1.67 g 1330 mg/l [96 hours] Effect: Mortality **Acute - LC50 - Marine water** Crustaceans - Brine shrimp - *Artemia salina* 600 mg/l [48 hours] Effect: Mortality **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* Age: ≤24 hours 4 mg/l [21 days] Effect: Reproduction
methanol	**Acute - LC50 - Marine water** Crustaceans - Common shrimp, sand shrimp - *Crangon crangon* - Adult 2500 mg/l [48 hours] Effect: Mortality **Acute - EC50 - Marine water** Algae - Green algae - *Ulva pertusa* 16.912 mg/l [96 hours] Effect: Reproduction **Chronic - NOEC - Marine water** Algae - Green algae - *Ulva pertusa* 9.96 mg/l [96 hours] Effect: Reproduction **Acute - LC50 - Fresh water** Fish - Zebra danio - *Danio rerio* - Egg Age: 12 290 mg/l [96 hours] Effect: Mortality

Conclusion/Summary [Product] : Not available.

SECTION 12: Ecological information

12.2 Persistence and degradability

Product/ingredient name	Result
trimethoxyvinylsilane	**Aerobic** OECD [Ready Biodegradability - Manometric Respirometry Test] 51% [28 days] - Not readily

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
trimethoxyvinylsilane	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
trimethoxyvinylsilane	1.1	-	Low
2-methylpropan-1-ol	1	-	Low
methanol	-0.77	<10	Low

12.4 Mobility in soil

Soil/Water partition coefficient : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Limestone	No	No	No	No	No	No	No
Silane, dichlorodimethyl-, reaction products with silica	No	N/A	N/A	No	N/A	N/A	N/A
magnesium carbonate	No	No	No	No	No	No	No
trimethoxyvinylsilane	No	N/A	N/A	No	N/A	N/A	N/A
bis(ethyl acetoacetato-O1', O3)bis(2-methylpropan-1-olato)titanium	No	N/A	N/A	No	N/A	N/A	N/A
2-methylpropan-1-ol	No	N/A	N/A	No	N/A	N/A	N/A
methanol	No	N/A	No	No	No	N/A	No

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

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).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized 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 : The classification of the product may meet the criteria for a hazardous waste.

Packaging

SECTION 13: Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not available.	Not available.	Not available.	Not available.
14.2 UN proper shipping name	Not available.	Not available.	Not available.	Not available.
14.3 Transport hazard class(es)	Not available.	Not available.	Not available.	Not available.
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	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 IMO instruments : 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 authorization

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)

Not 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

SECTION 15: Regulatory information

Product/ingredient name	%	Designation [Usage]
methanol	<0.1	69

Labeling : 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.

Chile :

China : Not determined.

Colombia :

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

Japan : **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 : ATE = Acute Toxicity Estimate
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	Justification
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H370	Causes damage to organs.

Full text of classifications

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
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
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
Skin Sens. 1B	SKIN SENSITIZATION - Category 1B
STOT SE 1	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

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