SAFETY DATA SHEET

ARBOMERIC® MP 20

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

1.1 Product identifier

Product name : ARBOMERIC® MP 20

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	Reason
For professional users only.	-

1.3 Details of the supplier of the safety data sheet

Adshead Ratcliffe & Co. Ltd.
Derby Road, Belper
Derbyshire.
DE56 1WJ
+44 (0)1773 826661

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

SECTION 2: Hazards identification

Hazard pictograms :



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.
P261 - Avoid breathing vapor.

Response : P362 + P364 - Take off contaminated clothing and wash it before reuse.
P337 + P313 - If eye irritation persists, get medical advice/attention.
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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 contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.

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]
1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters	REACH #: 01-2119519234-46 EC: 271-082-5 CAS: 68515-40-2	≤3	Not classified.	[2]
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)	[1]

SECTION 3: Composition/information on ingredients

			(inhalation)	
Dioctyltinbis(acetylacetonate)	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]
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]

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for vPvB

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. 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.

SECTION 4: First aid measures

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.

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 : 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 : Antidote for methanol poisoning is ethanol.

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 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. Avoid breathing dust. 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.

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
1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** TWA 8 hours: 5 mg/m³.
Dioctyltinbis(acetylacetonate)	**EH40/2005 WELs (United Kingdom (UK), 1/2020) [tin compounds, organic, except cyhexatin (ISO)]** Absorbed through skin. STEL 15 minutes: 0.2 mg/m³ (as Sn). TWA 8 hours: 0.1 mg/m³ (as Sn).
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
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
1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters	**DNEL - General population - Long term - Inhalation** 0.23 µg/m³

SECTION 8: Exposure controls/personal protection

	Effects: Systemic **DNEL - General population - Long term - Oral** 0.1 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Dermal** 1 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 1.32 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Dermal** 2.8 mg/kg bw/day Effects: Systemic
N-(3-(trimethoxysilyl)propyl)ethylenediamine	**DNEL - General population - Long term - Inhalation** 0.1 mg/m³ Effects: Local **DNEL - Workers - Long term - Inhalation** 0.6 mg/m³ Effects: Local **DNEL - General population - Long term - Oral** 4 mg/kg bw/day Effects: Systemic **DNEL - General population - Short term - Inhalation** 4 mg/m³ Effects: Local **DNEL - Workers - Short term - Inhalation** 5.36 mg/m³ Effects: Local **DNEL - General population - Long term - Inhalation** 26 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 130 mg/m³ Effects: Systemic **DNEL - General population - Short term - Inhalation** 26400 mg/m³ Effects: Systemic
Dioctyltinbis(acetylacetonate)	**DNEL - Workers - Long term - Dermal** 0.07 mg/kg bw/day Effects: Systemic **DNEL - Workers - Short term - Inhalation** 84 mg/m³ Effects: Systemic
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	**DNEL - General population - Long term - Oral** 0.18 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 0.31 mg/m³

SECTION 8: Exposure controls/personal protection

Effects: Systemic

DNEL - General population - Long term - Dermal
0.9 mg/kg bw/day
Effects: Systemic

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

DNEL - Workers - Long term - Dermal
1.8 mg/kg bw/day
Effects: Systemic

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

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

DNEL - Workers - Short term - Inhalation
130 mg/m³

SECTION 8: Exposure controls/personal protection

Effects: Systemic

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

PNECs

Product/ingredient name	Result
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 **Soil** 0.007 mg/kg
Dioctyltinbis(acetylacetonate)	**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 **Marine water sediment** 0.015 mg/kg **Soil** 0.016 mg/kg
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	**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

SECTION 8: Exposure controls/personal protection

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 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 : Mild.

Odor threshold : Not available.

Melting point/freezing point : Not available.

SECTION 9: Physical and chemical properties

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 : 400°C (752°F)

Decomposition temperature : Not available.

pH : Not applicable.

Viscosity : Dynamic (room temperature): 600000 to 1000000 mPa·s
Kinematic (room temperature): Not available.
Kinematic (40°C): Not available.

Solubility(ies) :

Media	Result
cold water	Not soluble

Solubility in water : Insoluble

Miscible with water : No.

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

Vapor pressure : Not available.

Evaporation rate : Not available.

Relative density : 1.44 to 1.54

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. 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
trimethoxyvinylsilane	**Rat - Oral - LD50** 7340 ul/kg Toxic effects: Olfaction - Other changes Behavioral - Somnolence (general depressed activity) Other - Hair **Rat - Male, Female - Oral - LD50** 6899 mg/kg **Rabbit - Female - Dermal - LD50** 3158 mg/kg **Rat - Inhalation - LC50 Vapor** 16.8 mg/l [4 hours]
1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters	**Rabbit - Dermal - LD50** >7940 mg/kg Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Food intake (animal) **Rat - Oral - LD50** >15800 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	**Rat - Oral - LD50** 2413 mg/kg Toxic effects: Behavioral - Tremor Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes **Rat - Inhalation - LC50 Dusts and mists** 1.49 mg/l [4 hours]
Dioctyltinbis(acetylacetonate)	**Rat - Oral - LD50** 2500 mg/kg **Rat - Dermal - LD50** >2000 mg/kg
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	**Rat - Oral - LD50** 3700 mg/kg **Rat - Dermal - LD50** 3170 mg/kg **Rat - Inhalation - LC50 Dusts and mists** 500 mg/m³ [4 hours] Toxic effects: Behavioral - Tremor Lung, Thorax, or Respiration - Dyspnea Gastrointestinal - Changes in structure or function of salivary glands
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]

SECTION 11: Toxicological information

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

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)
ARBOMERIC® MP 20	N/A	N/A	N/A	661.4	102.8
trimethoxyvinylsilane	6899	3158	N/A	16.8	N/A
N-(3-(trimethoxysilyl)propyl)ethylenediamine	2413	N/A	N/A	N/A	1.49
Dioctyltinbis(acetylacetonate)	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

Skin corrosion/irritation

Product/ingredient name	Result
trimethoxyvinylsilane	**Rabbit - Skin - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 500 mg
methanol	**Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 20 mg

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product/ingredient name	Result
trimethoxyvinylsilane	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	**Rabbit - Eyes - Severe irritant** Amount/concentration applied: 15 mg
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	**Rabbit - Eyes - Severe irritant** Observation period: 21 days Not reversible
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] : Eye Irrit. 2

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

SECTION 11: Toxicological information

Respiratory or skin sensitization

Product/ingredient name	Result
N-(3-(trimethoxysilyl)propyl)ethylenediamine	**Guinea pig - skin** Sensitizing
Dioctyltinbis(acetylacetonate)	**Mouse - skin** Sensitizing

Skin

Conclusion/Summary [Product] : Skin Sens. 1

Respiratory

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/ingredient name	Result
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	**Rat - Male, Female - Oral**

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Dioctyltinbis(acetylacetonate)	STOT SE 2, H371 (immune system) (oral)
methanol	STOT SE 1, H370

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
N-(3-(trimethoxysilyl)propyl)ethylenediamine	STOT RE 2, H373 (respiratory tract) (inhalation)

Aspiration hazard

Not available.

Information on the 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.

SECTION 11: Toxicological information

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 : Irritating to eyes. Sensitization

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
Dioctyltinbis(acetylacetonate)	**Sub-acute - Rat - Oral - NOAEL** 1.8 mg/kg [7 days] Toxic effects: thymus

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.

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]
N-(3-(trimethoxysilyl)propyl)ethylenediamine	**Acute - LC50 - Fresh water** Fish - *Brachydanio rerio* 597 mg/l [96 hours] **Acute - EC50 - Fresh water**

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	Daphnia - *Daphnia magna* 81 mg/l [48 hours] **Acute - EC50 - Fresh water** Algae 8.8 mg/l [72 hours] **Chronic - NOEC - Fresh water** Daphnia - *Daphnia magna* 1 mg/l [21 days]
bumetrizole	**Acute - LC50 - Fresh water** Fish - *Danio rerio* >100 mg/l [96 hours] **Acute - EC50 - Fresh water** Daphnia - *Daphnia magna* >100 mg/l [48 hours] **Chronic - NOEC - Fresh water** Daphnia - *Daphnia magna* 10 mg/l [21 days] **Acute - EC50 - Fresh water** Algae >100 mg/l [72 hours] **Chronic - NOEC - Fresh water** Fish - Zebra danio - *Danio rerio* - Juvenile (Fledgling, Hatchling, Weanling) Age: 2 months 100 µg/l [28 days] Effect: Genetics
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	**Acute - LC50 - Fresh water** Fish - *Lepomis macrochirus* 4.4 mg/l [96 hours] **Acute - EC50 - Fresh water** Daphnia - *Daphnia magna* 8.58 mg/l [48 hours] **Acute - EC50 - Fresh water** Algae - *Pseudokirchneriella subcapitata* 0.705 mg/l [72 hours] **Chronic - NOEC - Fresh water** Daphnia - *Daphnia magna* 0.23 mg/l [21 days]
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]

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Effect: Reproduction

Acute - LC50 - Fresh water
Fish - Zebra danio - *Danio rerio* - Egg
Age: 12
290 mg/l [96 hours]
Effect: Mortality

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

Product/ingredient name	Result
bumetrizole	10% [28 days] - Not readily

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
N-(3-(trimethoxysilyl)propyl) ethylenediamine	-	-	Readily
bumetrizole	>180 days [Fresh water] [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
1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters	6.66	155 to 886 [OECD 305 E]	High
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 : 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
1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters	No	N/A	No	No	No	N/A	No
N-(3-(trimethoxysilyl)propyl) ethylenediamine	N/A	N/A	N/A	Yes	N/A	N/A	N/A
Dioctyltinbis(acetylacetonate)	No	N/A	N/A	No	N/A	N/A	N/A
bumetrizole	No	Yes	Yes	No	Yes	Yes	Yes
bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate	N/A	N/A	N/A	Yes	N/A	N/A	N/A

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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 : Yes.

Waste catalogue

Waste code	Waste designation
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances

Packaging

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 regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
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)

Part	Ingredient name	Status
Part 1	dioctyltin compounds	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

Product/ingredient name	%	Designation [Usage]
Dioctyltinbis(acetylacetonate) methanol	<1 <0.1	20 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 : Not determined.

SECTION 15: Regulatory information

China : Not determined.

Colombia : Not determined.

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 Skin Sens. 1, H317	Calculation method Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapor.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
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.
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

SECTION 16: Other information

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 2	AQUATIC HAZARD (LONG-TERM) - 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	TOXIC TO REPRODUCTION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
Skin Sens. 1B	SKIN SENSITIZATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 1	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
STOT SE 2	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2

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Notice to reader

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