SAFETY DATA SHEET

ARBOSIL® HDLMS Grey

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

1.1 Product identifier

Product name : ARBOSIL® HDLMS Grey

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
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 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

Classification according to UK CLP/GHS

Not classified.

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

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

2.2 Label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

SECTION 2: Hazards identification

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : Contains N-(3-(trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.
Safety data sheet available on request.

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 : Curing process releases 2-pentanone oxime. 2-Pentanone oxime is classified as harmful if swallowed, causes serious eye irritation, may cause damage to blood/ spleen through prolonged/repeated exposure and is harmful to aquatic life with long lasting effects.
Curing process may release a small amount of methanol which is irritating to mucous membranes and has skin drying and narcotic effects.

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]
silicon dioxide	REACH #: 01-2119379499-16 EC: 231-545-4 CAS: 7631-86-9	≤10	Not classified.	[2]
2-Pentanone, 2,2',2''-[O,O',O''-(methylsilylidyne)trioxime]	REACH #: 01-2120004323-76 EC: 484-460-1	≤5	Acute Tox. 4, H302 Eye Irrit. 2, H319	[1]
titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2	≤0.3	Not classified.	[2]
dioctyltin dilaurate	UK (GB) REACH #: UK-01-4760535389-6 EC: 222-883-3 CAS: 3648-18-8 Index: 050-031-00-9	<0.3	Repr. 1B, H360D STOT RE 1, H372 (immune system)	[1] [2]
toluene	EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	≤0.1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 (central nervous	[1] [2]

SECTION 3: Composition/information on ingredients

			system (CNS)) (inhalation) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	
Silane, dichlorodimethyl-, reaction products with silica	REACH #: 01-2119379499-16 EC: 271-893-4 CAS: 68611-44-9	≤0.1	Not classified.	[2]
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

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. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Slightly irritating to the eyes.

Inhalation : No specific data.

Skin contact : May cause skin sensitisation.

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.
Curing process releases 2-pentanone oxime. 2-Pentanone oxime is classified as harmful if swallowed, causes serious eye irritation and may cause damage to blood/ spleen through prolonged/repeated exposure.
Curing process may release a small amount of methanol which is irritating to mucous membranes and has skin drying and narcotic effects.

SECTION 4: First aid measures

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
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.

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. Put on appropriate personal protective equipment.

For emergency responders : 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

: 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, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled 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

: 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).

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

Product/ingredient name	Exposure limit values
Limestone	**EH40/2005 WELs (United Kingdom (UK), 1/2020). [calcium carbonate inhalable dust/respirable dust]** TWA: 4 mg/m³ 8 hours. Form: respirable dust TWA: 10 mg/m³ 8 hours. Form: inhalable dust **EH40/2005 WELs (United Kingdom (UK), 1/2020). [limestone total inhalable/respirable]** TWA: 4 mg/m³ 8 hours. Form: respirable TWA: 10 mg/m³ 8 hours. Form: total inhalable
silicon dioxide	**EH40/2005 WELs (United Kingdom (UK), 1/2020). [silica, amorphous inhalable dust/respirable dust]** TWA: 2.4 mg/m³ 8 hours. Form: respirable dust TWA: 6 mg/m³ 8 hours. Form: inhalable dust
titanium dioxide	**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
dioctyltin dilaurate	**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.
toluene	**EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.** STEL: 384 mg/m³ 15 minutes. TWA: 191 mg/m³ 8 hours. TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes.
Silane, dichlorodimethyl-, reaction products with silica	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** TWA: 2.4 mg/m³ 8 hours. Form: Respirable dust TWA: 6 mg/m³ 8 hours. Form: inhalable dust
methanol	**EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.**

SECTION 8: Exposure controls/personal protection

	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.

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
2-Pentanone, 2,2',2''-[O,O',O''-(methylsilylidyne)trioxime]	DNEL	Long term Inhalation	0.229 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	0.065 mg/kg bw/day	Workers	Systemic
dioctyltin dilaurate	DNEL	Long term Oral	0.0005 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.0009 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	0.0035 mg/m³	Workers	Systemic
toluene	DNEL	Long term Oral	8.13 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	56.5 mg/m³	General population	Local
	DNEL	Long term Inhalation	56.5 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	192 mg/m³	Workers	Local
	DNEL	Long term Inhalation	192 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	226 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	226 mg/m³	General population	Local
	DNEL	Short term Inhalation	226 mg/m³	General population	Systemic
	DNEL	Long term Dermal	384 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	384 mg/m³	Workers	Local
	DNEL	Short term Inhalation	384 mg/m³	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	Systemic
	DNEL	Long term Dermal	20 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	26 mg/m³	General population	Local
	DNEL	Long term Inhalation	26 mg/m³	General population	Local
	DNEL	Short term Inhalation	26 mg/m³	General population	Systemic

SECTION 8: Exposure controls/personal protection

	DNEL	Long term Inhalation	26 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	130 mg/m³	Workers	Local
	DNEL	Long term Inhalation	130 mg/m³	Workers	Local
	DNEL	Short term Inhalation	130 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	130 mg/m³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
2-Pentanone, 2,2',2''-[O,O',O''-(methylsilylidyne)trioxime]	Fresh water	0.1 mg/l	-
	Marine water	0.01 mg/l	-
	Sewage Treatment Plant	2.15 mg/l	-
	Fresh water sediment	0.569 mg/kg	-
	Marine water sediment	0.057 mg/kg	-
	Soil	0.044 mg/kg	-
toluene	Fresh water	0.68 mg/l	-
	Fresh water	0.68 mg/l	-
	Marine water	0.68 mg/l	-
	Sewage Treatment Plant	13.61 mg/l	-
	Fresh water sediment	16.39 mg/kg	-
	Marine water sediment	16.39 mg/kg	-
	Soil	2.89 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. 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: safety glasses with side-shields.

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.

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 : Use appropriate respiratory protection if there is a risk of exceeding any exposure limits. 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.

SECTION 8: Exposure controls/personal protection

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.]

Colour : Grey.

Odour : Not available.

Odour 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 available.

Viscosity : Not applicable.

Solubility in water : Insoluble

Miscible with water : No.

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

Vapour pressure : Not available.

Relative density : 1.24 to 1.28

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 : 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	Species	Dose	Exposure
2-Pentanone, 2,2',2''-[O,O',O''-(methylsilylidyne) trioxime]	LD50 Dermal	Rat - Male, Female	>1782 mg/kg	-
	LD50 Oral	Rat - Female	1234 mg/kg	-
dioctyltin dilaurate	LD50 Oral	Rat	6450 mg/kg	-
toluene	LC50 Inhalation Vapour	Rat	49 g/m³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Silane, dichlorodimethyl-, reaction products with silica	LC50 Inhalation Vapour	Rat	450 mg/m³	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
methanol	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/Summary : 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 (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
ARBOSIL® HDLMS Grey	31636.2	N/A	N/A	N/A	N/A
2-Pentanone, 2,2',2''-[O,O',O''-(methylsilylidyne) trioxime]	1234	N/A	N/A	N/A	N/A
dioctyltin dilaurate	6450	N/A	N/A	N/A	N/A
toluene	N/A	N/A	N/A	49	N/A
methanol	100	300	64000	3	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
silicon dioxide	Eyes - Mild irritant	Rabbit	-	24 hours 25 mg	-
2-Pentanone, 2,2',2''-[O,O',O''-(methylsilylidyne)trioxime]	Eyes - Irritant	Rabbit	-	-	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 ug l	-
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 mg	-
	Eyes - Mild irritant	Rabbit	-	870 ug	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin - Mild irritant	Pig	-	24 hours 250 uL	-
	Skin - Mild irritant	Rabbit	-	435 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-
methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	40 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-

Conclusion/Summary

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

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

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

SECTION 11: Toxicological information

Sensitisation

Conclusion/Summary

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

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
toluene methanol	Category 3 Category 1	- -	Narcotic effects -

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
dioctyltin dilaurate toluene	Category 1 Category 2	- inhalation	immune system central nervous system (CNS)

Aspiration hazard

Product/ingredient name	Result
toluene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Slightly irritating to the eyes.

Inhalation : No specific data.

Skin contact : May cause skin sensitisation.

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 : May cause skin sensitisation.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

SECTION 11: Toxicological information

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

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

General : Curing process releases 2-pentanone oxime. 2-Pentanone oxime is classified as harmful if swallowed, causes serious eye irritation and may cause damage to blood/spleen through prolonged/repeated exposure.
Curing process may release a small amount of methanol which is irritating to mucous membranes and has skin drying and narcotic effects.

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
silicon dioxide	Acute EC50 2.2 g/L Fresh water	Daphnia - Water flea - *Daphnia magna* - Neonate	48 hours
	Chronic NOEC 12.5 mg/l Fresh water	Daphnia - Water flea - *Daphnia magna* - Neonate	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 pulex* - Neonate	48 hours
	Acute LC50 >1000000 µg/l Marine water	Fish - Mummichog - *Fundulus heteroclitus*	96 hours
toluene	Acute EC50 >433 ppm Marine water	Algae - Diatom - *Skeletonema costatum*	96 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Scud - *Gammarus pseudolimnaeus* - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Water flea - *Daphnia magna* - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Coho salmon,silver salmon - *Oncorhynchus kisutch* - Fry	96 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - Water flea - *Daphnia magna*	21 days
methanol	Acute EC50 16.912 mg/l Marine water	Algae - Green algae - *Ulva pertusa*	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Common shrimp, sand shrimp - *Crangon crangon* - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Water flea - *Daphnia magna* - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Zebra danio - *Danio rerio* - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Green algae - *Ulva pertusa*	96 hours

Conclusion/Summary : Based on available data, the classification criteria are not met.
Curing process releases 2-pentanone oxime. 2-Pentanone oxime is classified as harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

SECTION 12: Ecological information

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-Pentanone, 2,2',2''-[O,O',O''-(methylsilylidyne)trioxime]	-	-	Not readily
toluene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
dioctyltin dilaurate	-	<100	Low
toluene	2.73	90	Low
methanol	-0.77	<10	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

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

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 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 : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

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. 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

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 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	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]
dioctyltin dilaurate toluene methanol	<0.3 ≤0.1 <0.1	20 48 69

Labelling : Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

SECTION 15: Regulatory information

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 : **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

SECTION 16: Other information

Procedure used to derive the classification

Not classified.

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H360D	May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful 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 Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
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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