



SAFETY DATA SHEET ARBOSIL HDLMS

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

1.1. Product identifier

Product name ARBOSIL HDLMS

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

Identified uses [PC1] Sealant.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Adshead Ratcliffe & Co. Ltd.
Derby Road, Belper
Derbyshire.
DE56 1WJ
T: (+44) 01773 826661
F: (+44) 01773 821215
E: sds.carlisle@ccm-europe.com

1.4. Emergency telephone number

Emergency telephone NPIS (National Poisons Information Service): 0344 892 0111 (for medical professionals only). For medical advice, members of the public should contact NHS 111 in England: 111; NHS 24 in Scotland: 111; NHS Direct in Wales: 111 or 0845 4647. In Northern Ireland: contact your local GP or pharmacist.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Hazard statements NC Not Classified

Supplemental label information EUH208 Contains N-(3-(Trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.
EUH210 Safety data sheet available on request.
EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB. 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. Curing process releases a small amount of methanol.

SECTION 3: Composition/information on ingredients

ARBOSIL HDLMS

3.2. Mixtures

| | |
|--|--|
| O,O',O''-(Methylsilylidyne)trioxime 2-pentanone | < 5% |
| CAS number: 37859-55-5 | EC number: 484-460-1 |
| | REACH registration number: 01-2120004323-76-XXXX |
| Classification | |
| Acute Tox. 4 - H302 | |
| Eye Irrit. 2 - H319 | |

The full text for all hazard statements is displayed in Section 16.

Composition comments Light colours of this product may contain at least 1% of titanium dioxide but less than 1% of all particles have a diameter $\leq 10 \mu\text{m}$ therefore the classification Carc. 2; H351 does not apply. The labelling statement, EUH212 ('Warning! Hazardous respirable dust may be formed when used. Do not breathe dust') applies however considering the form and use of the product it is unlikely that respirable dust will be generated.

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|-----------------------------------|--|
| General information | If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel. |
| Inhalation | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist. |
| Ingestion | Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel. |
| Skin contact | Rinse with water. If skin irritation or rash occurs: Get medical advice/attention. |
| Eye contact | Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues. |
| Protection of first aiders | First aid personnel should wear appropriate protective equipment during any rescue. |

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

| | |
|----------------------------|--|
| General information | The severity of the symptoms described will vary dependent on the concentration and the length of exposure. 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. Curing process may release a small amount of methanol which is irritating to mucous membranes and has skin drying and narcotic effects. |
| Inhalation | No specific symptoms known. |
| Ingestion | No specific symptoms known. |
| Skin contact | May cause an allergic skin reaction. |
| Eye contact | No specific symptoms known. May be slightly irritating to eyes. |

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

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|-----------------------------|---|
| Notes for the doctor | Treat symptomatically. |
| Specific treatments | Antidote for methanol poisoning is ethanol. |

SECTION 5: Firefighting measures

ARBOSIL HDLMS

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards None known.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. For personal protection, see Section 8.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up For personal protection, see Section 8. Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

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7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Titanium dioxide

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

Diocetyl tin dilaurate

Long-term exposure limit (8-hour TWA): WEL 0.1 mg/m³

Short-term exposure limit (15-minute): WEL 0.2 mg/m³

as Sn

Sk

Toluene

Long-term exposure limit (8-hour TWA): WEL 50 ppm 191 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 384 mg/m³

Sk

Methanol

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³

Sk

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

O,O',O''-(Methylsilylidyne)trioxime 2-pentanone (CAS: 37859-55-5)

| | |
|-------------|--|
| DNEL | Workers - Inhalation; Long term systemic effects: 0.229 mg/m ³ Workers - Dermal; Long term systemic effects: 0.065 mg/kg |
| PNEC | Fresh water; 0.1 mg/l marine water; 0.01 mg/l STP; 2.15 mg/l Sediment (Freshwater); 0.569 mg/kg Sediment (Marinewater); 0.057 mg/kg Soil; 0.044 mg/kg |

N-(3-(Trimethoxysilyl)propyl)ethylenediamine (CAS: 1760-24-3)

| | |
|-------------|---|
| PNEC | Fresh water; 0.062 mg/l marine water; 0.006 mg/l STP; 25 mg/l Sediment (Freshwater); 0.22 mg/kg Sediment (Marinewater); 0.022 mg/kg |
|-------------|---|

Diocetyl tin dilaurate (CAS: 3648-18-8)

| | |
|-------------|---|
| DNEL | Workers - Inhalation; Long term systemic effects: 0.004 mg/m ³ |
|-------------|---|

ARBOSIL HDLMS

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| PNEC | Fresh water; 0.002 µg/l |
| | Fresh water, Intermittent release; 0.018 µg/l |
| | marine water; 0.0002 µg/l |
| | STP; 100 mg/l |
| | Sediment (Freshwater); 0.028 mg/kg |
| | Sediment (Marinewater); 0.003 mg/kg |
| | Soil; 0.006 mg/kg |
| Oral (food); 0.02 mg/kg | |

2-Pentanone oxime (CAS: 623-40-5)

| | |
|-------------|---|
| DNEL | Workers - Inhalation; Long term systemic effects: 51.54 mg/m ³ |
| | Workers - Dermal; Long term systemic effects: 0.097 mg/kg/day |
| PNEC | Fresh water; 0.088 mg/l |
| | Intermittent release; 0.88 mg/l |
| | marine water; 0.009 mg/l |
| | STP; 2 mg/l |
| | Sediment (Freshwater); |

Toluene (CAS: 108-88-3)

| | |
|--------------------|--|
| DNEL | Workers - Inhalation; Long term systemic effects: 192 mg/m ³ |
| | Workers - Inhalation; Short term systemic effects: 384 mg/m ³ |
| | Workers - Inhalation; Long term local effects: 192 mg/m ³ |
| | Workers - Inhalation; Short term systemic effects: 384 mg/m ³ |
| | Workers - Dermal; Long term systemic effects: 384 mg/kg/day |
| PNEC | - Fresh water; 0.68 mg/l |
| | - marine water; 0.68 mg/l |
| | - Intermittent release; 0.68 mg/l |
| | - STP; 13.61 mg/l |
| | - Sediment (Freshwater); 16.39 mg/kg |
| | - Sediment (Marinewater); 16.39 mg/kg |
| - Soil; 2.89 mg/kg | |

Methanol (CAS: 67-56-1)

| | |
|-------------|--|
| DNEL | Workers - Inhalation; Long term systemic effects: 130 mg/m ³ |
| | Workers - Inhalation; Short term systemic effects: 130 mg/m ³ |
| | Workers - Inhalation; Long term local effects: 130 mg/m ³ |
| | Workers - Inhalation; Short term local effects: 130 mg/m ³ |
| | Workers - Dermal; Long term systemic effects: 20 mg/kg/day |
| | Workers - Dermal; Short term systemic effects: 20 mg/kg/day |

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

ARBOSIL HDLMS

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| Hand protection | Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. |
| Other skin and body protection | Wear appropriate clothing to prevent repeated or prolonged skin contact. |
| Hygiene measures | Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product. |
| Respiratory protection | Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. |
| Environmental exposure controls | Keep container tightly sealed when not in use. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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| Appearance | Paste. |
| Colour | Various colours. |
| Odour | Slight. |
| Odour threshold | Not determined. |
| pH | pH (concentrated solution): Not applicable. |
| Melting point | Not applicable. |
| Initial boiling point and range | Not applicable. |
| Flash point | Not applicable. |
| Evaporation rate | Not applicable. |
| Evaporation factor | Not applicable. |
| Upper/lower flammability or explosive limits | Not applicable. |
| Vapour pressure | Not applicable. |
| Vapour density | Not applicable. |
| Relative density | 1.28 @ 20°C |
| Solubility(ies) | Insoluble in water. |
| Partition coefficient | Not applicable. |
| Auto-ignition temperature | Not applicable. |
| Decomposition Temperature | Not determined. |
| Viscosity | ~ 10,000 P @ 20°C |
| Explosive properties | Not applicable. |
| Oxidising properties | Not applicable. |

ARBOSIL HDLMS

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 32,352.5

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

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

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

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

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met. May cause sensitisation or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

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

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure. 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.

Inhalation No specific symptoms known.

Ingestion No specific symptoms known.

Skin contact May cause an allergic skin reaction.

Eye contact No specific symptoms known. May cause temporary eye irritation.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target organs No specific target organs known.

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment. Curing process releases 2-pentanone oxime. 2-Pentanone oxime is classified as harmful to aquatic life with long lasting effects.

12.1. Toxicity

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

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not applicable.

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

ARBOSIL HDLMS

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Not applicable.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

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

National regulations

Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/720. The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1567.
The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, UK SI 2019/758, UK SI 2019/858 and UK SI 2019/1144. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, UK SI 2020/1577.

ARBOSIL HDLMS

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| EU legislation | Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). |
| Health and environmental listings | Diocetyl tin dilaurate is on the EU Candidate List of Substances of Very High Concern (SVHCs) for Authorisation. |

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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|---|--|
| Abbreviations and acronyms used in the safety data sheet | ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. IATA: International Air Transport Association. ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. CAS: Chemical Abstracts Service. ATE: Acute Toxicity Estimate. LC ₅₀ : Lethal Concentration to 50 % of a test population. LD ₅₀ : Lethal Dose to 50% of a test population (Median Lethal Dose). EC ₅₀ : 50% of maximal Effective Concentration. PBT: Persistent, Bioaccumulative and Toxic substance. vPvB: Very Persistent and Very Bioaccumulative. |
| Key literature references and sources for data | SDS from supplier. Source: European Chemicals Agency, http://echa.europa.eu/ |
| Revision comments | This is the first issue. |
| Revision date | 26/01/2022 |
| Revision | 1 |
| SDS number | 20500 |
| SDS status | Approved. |
| Hazard statements in full | H302 Harmful if swallowed. H319 Causes serious eye irritation. |

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.