

SAFETY DATA SHEET ARBOSIL LMS

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

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

1.1. Product identifier

Product name ARBOSIL LMS

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

Identified uses [PC1] Sealant.

Uses advised againstNo 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 and is harmful to aquatic life with long lasting effects. Curing process releases a small amount of methanol.

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SECTION 3: Composition/information on ingredients

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 µm 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 aidersFirst 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 releases a small amount

of methanol.

InhalationNo specific symptoms known.IngestionNo 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

Notes for the doctor Treat symptomatically.

Specific treatments Antidote for methanol poisoning is ethanol.

SECTION 5: Firefighting measures

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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

Dioctyltin 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/m³

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

2-Pentanone, O, O',O"-(ethenylsilylidyne)trioxime (CAS: 58190-62-8)

DNEL Workers - Inhalation; Long term systemic effects: 0.229 mg/m³

Workers - Dermal; Long term systemic effects: 0.065 mg/kg/day

PNEC Fresh water; 0.103 mg/l

marine water; 0.01 mg/l

STP; 2.22 mg/l

Sediment (Freshwater); 0.586 mg/kg Sediment (Marinewater); 0.059 mg/kg

Soil; 0.046 mg/kg

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

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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

Dioctyltin dilaurate (CAS: 3648-18-8)

DNEL Workers - Inhalation; Long term systemic effects: 0.004 mg/m³

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/m³

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/m³

Workers - Inhalation; Short term systemic effects: 384 mg/m³ Workers - Inhalation; Long term local effects: 192 mg/m³ Workers - Inhalation; Short term systemic effects: 384 mg/m³ 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/kgSediment (Marinewater); 16.39 mg/kg

- Soil; 2.89 mg/kg

Methanol (CAS: 67-56-1)

DNEL Workers - Inhalation; Long term systemic effects: 130 mg/m³

Workers - Inhalation; Short term systemic effects: 130 mg/m³ Workers - Inhalation; Long term local effects: 130 mg/m³ Workers - Inhalation; Short term local effects: 130 mg/m³ Workers - Dermal; Long term systemic effects: 20 mg/kg/day Workers - Dermal; Short term systemic effects: 20 mg/kg/day

8.2. Exposure controls

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Protective equipment





Appropriate engineering

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

controls

Eye/face protection

Unless the assessment indicates a higher degree of protection is required, the following

protection should be worn: Tight-fitting safety glasses.

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

Appearance Paste.

Colour Various colours.

Odour Slight.

Odour threshold Not determined.

pН Technically not feasible.

Melting point No information available.

Initial boiling point and range No information available.

Flash point Not applicable.

Evaporation rate No information available.

Evaporation factor No information available.

Flammability (solid, gas) No information available.

Upper/lower flammability or

explosive limits

No information available.

Vapour pressure No information available.

Vapour density No information available.

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Relative density 1.28 @ 20°C

Solubility(ies) Insoluble in water.

Partition coefficientNo information available.Auto-ignition temperatureNo information available.Decomposition TemperatureNo information available.

Explosive properties Not considered to be explosive.

Oxidising properties Does not meet the criteria for classification as oxidising.

8000 - 10000 P @ 20°C

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Viscosity

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

products

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

on

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 LD₅o) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 32,206.71

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.

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Serious eye damage/irritation

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

Respiratory sensitisation

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

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

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

Reproductive toxicity

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

Reproductive toxicity -

Based on available data the classification criteria are not met.

development

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. 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 cause temporary eye irritation.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target organs No specific target organs known.

Toxicological information on ingredients.

O,O',O"-(Methylsilylidyne)trioxime 2-pentanone

Acute toxicity - oral

Harmful if swallowed. Summary

Acute toxicity oral (LD₅o

mg/kg)

1.234.0

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Species Rat

ATE oral (mg/kg) 1,234.0

Acute toxicity - dermal

Notes (dermal LD₅o) LD₅o >1782 mg/kg, Dermal, Rat Read-across data.

Serious eye damage/irritation

Summary Causes serious eye irritation.

Serious eye damage/irritation

OECD 405 Acute eye irritation / corrosion: Irritating (rabbit)

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.

Ecological information on ingredients.

O,O',O"-(Methylsilylidyne)trioxime 2-pentanone

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >113 mg/l, Oncorhynchus mykiss (Rainbow trout)

Read-across data.

Acute toxicity - aquatic

- aquatic EC₅₀, 48 hours: >113 mg/l, Daphnia magna Read-across data.

Acute toxicity - aquatic

plants

invertebrates

EC₅₀, 72 hours: 100 mg/l, Pseudokirchneriella subcapitata

12.2. Persistence and degradability

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

Ecological information on ingredients.

O,O',O"-(Methylsilylidyne)trioxime 2-pentanone

Persistence and degradability

Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

O,O',O"-(Methylsilylidyne)trioxime 2-pentanone

Bioaccumulative potential BCF: 3.103 L/kg, QSAR

12.4. Mobility in soil

Mobility No data available.

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Ecological information on ingredients.

O,O',O"-(Methylsilylidyne)trioxime 2-pentanone

Adsorption/desorption

- Koc: 20.9 @ 20°C

coefficient

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB

This product does not contain any substances classified as PBT or vPvB.

assessment

12.6. Other adverse effects

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

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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.

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

Dioctyltin 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

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.

LC₅₀: Lethal Concentration to 50 % of a test population.

LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).

EC₅: 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 20505

SDS status Approved.

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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.