

SAFETY DATA SHEET



AQUEOUS VERMICULITE DISPERSION

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Revision: 26th June 2025, version 4.0, supersedes version 3.2 (28.05.25)**A Safety Data Sheet is not required for this product under Article 31 of REACH.****SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Product name: AVD
Substance: Aqueous Vermiculite Dispersion
EC No.: -
REACH Registration: Exempt – see [section 3](#)
CAS No.: 1318-00-09 (vermiculite)
Other names: Vermiculite dispersion

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

- Speciality fire extinguishing agent.

Uses advised against and reason:

- Not intended for other uses (no safe use data available).

1.3 Details of the supplier of the safety data sheet

Supplier: AVD Fire Limited
Address: Jamage Industrial Estate, Stoke-on-Trent, Staffordshire
Postcode / Country: ST7 1XW / United Kingdom
Telephone / Fax: +44 (0)1782 383000 / 383101
Email: DupreTechnical@goodwingroup.com – Email subject: *SDS Enquiry*
National Contact: UKREACHCA@hse.gov.uk

1.4 Emergency telephone number

Contact: +44 (0)1782 383000
Language: English
Opening hours: Available Monday to Friday (not bank holidays), 8 am to 5 pm (UK time)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**

Non-hazardous substance - this product does not meet the criteria for classification in any hazard class.

2.1.2 Additional Information

[Section 8](#) gives further information on the workplace exposure limit.

2.2 Label elements**2.2.1 Labelling according Regulation (EC) No 1272/2008 [CLP]:****Hazard Pictogram(s)**

None

Signal word

None

Hazard statement(s)

None

Precautionary statement(s)

None

Supplemental Hazard Information

None

2.3 Other hazards

None.

This substance does not meet the criteria for PBT or vPvB according to Annex XIII of the REACH regulations.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	EC No.	CAS No.	% Weight	REACH Registration No.	CLP classification according to Regulation (EC) 1272/2008
Vermiculite	-	1318-00-9	5 - 20 %	Exempt in accordance with Annex V.7	Not Classified.
Water	231-791-2	7732-18-5	80 - 95 %	Exempt in accordance with Annex IV	Not Classified.
Proprietary Ingredients*	N/A	N/A	<1 %	-	No hazardous substances.

* Rheology modifiers and syneresis control agents: registered or exempt from registration.

SECTION 4: First aid measures

4.1 Description of first aid measures

4.1.1 General Information:

No serious adverse effects are anticipated.

If seeking medical advice - show this SDS to the medical professional.

4.1.2 Following inhalation:

Not anticipated. Aqueous product – treatment as for water.

Remove exposed person to fresh air, keep warm and at rest.

4.1.3 Following skin contact:

If irritation occurs then wash affected skin with plenty of soap and water.

Get medical attention if irritation persists after washing.

4.1.4 Following eye contact:

Immediately flush with clean water or eye wash solution, holding the eyelids apart for at least 15 minutes.

Seek medical attention if irritation persists.

4.1.5 Following ingestion:

There are no known adverse effects for small quantities and hence first aid measures are not usually required.

For larger quantities, wash mouth out with water and give water to drink. Do not induce vomiting.

If gastrointestinal symptoms occur then seek medical advice.

4.1.6 Self-protection of the first aider:

Spilt material may be a slip hazard.

Wear gloves to protect against skin irritation.

4.2 Most important symptoms and effects, both acute and delayed

4.2.1 General information:

Significant acute or delayed effects are not anticipated.

4.2.2 Symptoms and effects:

In rare circumstances the basic nature of AVD (pH ~9) may cause temporary irritation of the skin and/or eyes.

When this product has dried, mechanically generated dust may cause irritation to eyes, nose or throat.

4.3 Indication of any immediate medical attention and special treatment needed

4.3.1 Specific treatment:

A mild neutralising agent may be of benefit as vermiculite is a basic mineral (AVD has a pH ~9).

4.3.2 Notes for the doctor:

Treat symptomatically, no special antidote required.

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 General information:

Non-combustible substance; however, packaging and surrounding materials may be combustible.

5.1.2 Suitable extinguishing media:

Use an extinguishing agent suitable for the surrounding fire.

5.1.3 Unsuitable extinguishing media:

No product-specific restrictions.

5.2 Special hazards arising from the substance or mixture

5.2.1 General information:

Spilt material may be a slip hazard.

5.2.2 Hazardous combustion products:

Not applicable – non-combustible substance.

5.3 Advice for firefighters

No specific fire fighting equipment is required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:

Use personal protective equipment ([Section 8](#)) to protect eyes, skin and clothing.

Spilt material may be a slip hazard.

6.1.2 For emergency responders:

Use personal protective equipment, see [Section 8](#).

6.2 Environmental precautions

Prevent large quantities of product from entering drains, sewers or watercourses.

6.3 Methods and material for containment and cleaning up

6.3.1 For containment:

Contain and absorb excess liquid with, for example, thermally-expanded vermiculite granules.

6.3.2 For cleaning up:

Absorb excess product with absorbent non-combustible material (e.g. thermally-expanded vermiculite granules).

Sweep up and transfer, e.g. shovel, in to a suitable, labelled container.

6.3.3 Disposal and other information:

Clear spills immediately to reduce slip hazard.

Dispose of in compliance with local and national regulations.

6.4 Reference to other sections

Suitable personal protective equipment is quoted in [Section 8](#).

Further information on waste and disposal is given in [Section 13](#).

SECTION 7: Handling and storage

7.1 Precautions for safe handling

7.1.1 Protective Measures:

Spilt product should be treated as a slip hazard.

Wear personal protective equipment (see [Section 8](#)).

7.1.2 Measures to prevent fire:

This product is non-flammable; no special fire protection measures are necessary.

7.1.3 Measures to prevent aerosol and dust generation:

Reseal packaging when not in use.

Use engineering measures (e.g. local dust extraction) to provide effective control of dust from dry product or aerosol particulates in order to ensure compliance with the current Occupational Exposure Limits.

7.1.4 Measures to protect the environment:

Do not dispose of excess material or spillages into the drains.

7.1.5 Advice on general occupational hygiene:

Wash hands after use and regularly during use especially if contaminated.

In working areas do not eat, drink or smoke when using this product.

Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for storage, including any incompatibilities

7.2.1 Technical measures and storage conditions:

Store in original packaging.

Protect packaging from damage.

7.2.2 Requirements for storage rooms and vessels:

- Replace lids when not in use.
- Store between 5 °C and 25 °C where at all possible; above 25 °C increased water evaporation may lead to drying out of the product but otherwise the product is stable up to at least 80 °C.
- Do not freeze as the product will not flow when solid and the associated expansion may damage the packaging. AVD is not damaged by freezing but will require re-homogenisation (stirring) after thawing.

7.2.3 Further information on storage:

None.

7.3 Specific end use(s)

Recommendations:

Observe instructions for use. Use of this product is restricted to “professional user”.

Wear a suitable mask if local dust extraction does not reduce dust levels below the WEL (See [Section 8](#)).

Wear protective clothing including gloves and goggles.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Substance	CAS Number	EH40/2005 Workplace exposure limits
Vermiculite	1318-00-09	Substance not listed in EH40/2005. For WELs (of dried material), treat as nuisance dust (EH40 section 44): 10 mg m ⁻³ (Inhalable dust) / 4 mg m ⁻³ (Respirable dust)

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

Local dust extraction (for aerosol particulates or dust from dried product).

8.2.2 Individual protection measures:

- Hands:** Protective gloves if required – no specific type recommended.
Wash hands after each work session.
- Eyes:** Goggles or mask – no specific type recommended.
- Skin:** Wear appropriate PPE, protective work clothing. Wash contaminated clothing before reuse
- Respiratory:** In cases of prolonged exposure to airborne dust or aerosol concentrations, wear respiratory protective equipment that complies with European or national legislation – no specific recommendation.
- General:** Protective overalls. Soiled clothing must be adequately laundered to avoid becoming a dust source.

8.2.3 Environmental exposure controls:

Use appropriate engineering controls to prevent dust escaping to the atmosphere.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---|---|
| a) Appearance: | Liquid (suspension of solid in water) |
| b) Colour: | Gold / brown |
| c) Odour: | Slight earthy smell Odour threshold: Aucune donnée disponible |
| d) Melting point/freezing point: | Melting point of dried material >1300 °C |
| e) Initial boiling point and boiling range: | Aqueous component b.p. approx. 100 °C |
| f) Flammability: | Solid – Not Flammable. Liquid – Not Flammable |
| g) Lower and upper explosion limit: | Liquid phase – Not applicable [Synonymous with Flammability limit] |
| h) Flash point: | Not applicable – Not flammable |
| i) Auto-ignition temperature: | Not applicable – Not flammable |
| j) Decomposition temperature: | Not applicable |
| k) pH: | Basic ~8.5 (7-10) |
| l) Kinematic viscosity: | 2500 mm ² s ⁻¹ [2200-2900 (2320-2680)] |
| m) Solubility: | Product is miscible with water |
| n) Partition coefficient n-octanol/water (log value): | Not applicable |
| o) Vapour pressure: | Water at 20 °C = 2.4 kPa |
| p) Density and/or relative density: | ~1.12 kg l ⁻¹ at 20 °C |
| q) Relative vapour density: | ~0.633 |
| r) Particle characteristics: | Equivalent spherical diameter, d50 = 70 ±10 µm
(Laser light scattering, volume distribution) |

9.2 Other information

9.2.1 Information with regard to physical hazard classes:

- | | |
|---|----------------|
| a) Explosives: | Not applicable |
| b) Flammable gases: | Not applicable |
| c) Aerosols: | Not applicable |
| d) Oxidising gases: | Not applicable |
| e) Gases under pressure: | Not applicable |
| f) Flammable liquids: | Not applicable |
| g) Flammable solids: | Not applicable |
| h) Self-reactive substances and mixtures: | Not applicable |
| i) Pyrophoric liquids: | Not applicable |
| j) Pyrophoric solids: | Not applicable |
| k) Self-heating substances and mixtures: | Not applicable |
| l) Substances and mixtures, which emit flammable gases in contact with water: | Not applicable |
| m) Oxidising liquids: | Not applicable |
| n) Oxidizing solids: | Not applicable |
| o) Organic peroxides: | Not applicable |
| p) Corrosive to metals: | Not applicable |
| q) Desensitised explosives: | Not applicable |

9.2.2 Other safety characteristics:

- | | |
|------------------|------------------------|
| g) Conductivity: | <1 mS cm ⁻¹ |
|------------------|------------------------|

No further other information available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

No data available.

10.6 Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

a) Acute Toxicity

Not applicable / No data available.

b) Skin corrosion/irritation

Not applicable / No data available.

c) Serious eye damage/irritation

Not applicable / No data available..

d) Respiratory or skin sensitisation

Not applicable / No data available. .

e) Germ cell mutagenicity

Not applicable / No data available.

f) Carcinogenicity

Not applicable / No data available.

g) Reproductive toxicity

Not applicable / No data available.

h) STOT-single exposure

Not applicable / No data available.

i) STOT-repeated exposure

Not applicable / No data available.

j) Aspiration hazard

Not applicable / No data available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties:

Not applicable / No data available

11.2.2 Other information

None.

SECTION 12: Ecological information

12.1 Toxicity

Not applicable / No data available.

12.2 Persistence and degradability

Not applicable / No data available.

12.3 Bioaccumulative potential

Not applicable / No data available.

12.4 Mobility in soil

Not applicable / No data available.

12.5 Results of PBT and vPvB assessment

PBT / vPvB assessment not available as chemical safety assessment not required / not conducted.
No components are included in the EU candidate list of substances of very high concern (SVHCs).

12.6 Endocrine disrupting properties

Not applicable / No data available.

12.7 Other adverse effects

No adverse effects expected if regulations and advice for storage and handling are observed.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

This product is not classified as hazardous waste under the EC Directive 2008/98/EC or as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No.894.
Dispose of according to national / regional legislation.

SECTION 14: Transport information**14.1 UN number or ID number**

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not classified.

14.4 Packing group

Not classified.

14.5 Environmental hazards

Not classified.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU REGULATIONS****Regulation (EC) No. 2037/2000 (substances that deplete ozone)**

Not applicable

Regulation (EC) No. 850/2004 (persistent organic pollutants)

Not applicable

Regulation (EC) No.689/2008 (concerning the export and import of dangerous chemicals)

Not applicable

Regulation (EC) No. 1272/2008 (Classification, Labelling and Packaging of substances and mixtures)

This material does not meet any of the criteria.

Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH)

The mineral vermiculite is a naturally occurring product and, hence, article 2 (7) (b) and Annex V paragraph 7 of the REACH regulations exempts this material from REACH registration.

US FEDERAL REGULATIONS

Vermiculite is listed on the United States TSCA (Toxic Substances Control Act) inventory.

Source of Reference for OELs

HSE EH40 for Workplace Exposure Limits

15.2 Chemical safety assessment

No chemical safety assessment has been carried out by the supplier.

SECTION 16: Other information

i. Indication of changes

Version 4.0

Full revision to ensure compliance as follows:

- a) EU REACH REGULATION (EC) No 1907/2006 as amended by COMMISSION REGULATION (EU) 2020/878 of 18th June 2020 (M58) and consolidated up to COMMISSION REGULATION (EU) 2025/660 of 1st April 2025 (M80).
- b) UK REACH (Amendment) Regulations 2023: Statutory Instrument 2023 No. 722
- c) EU CLP Regulation (EC) No 1272/2008 consolidated up to Regulation (EU) 2024/2865 of the European Parliament and of the Council of 23rd October 2024 (M35).
- d) UK Classification, Labelling and Packaging of Substances and Mixtures (Amendment and Consequential Provision) Regulations 2023: Statutory Instrument 2023 No. 1344

Version 3.2 – Update supplier to AVD Fire Limited and REACH consolidated up to M80 of 2nd April 2025.

Version 3.1 Includes UK REACH and GB CLP and revised in line with the latest versions of EU REACH and CLP.

- e) UK REACH – the REACH etc. (Amendment) Regulations 2021
- f) EU REACH – consolidated up to M69 of 13th December 2021.
- g) GB CLP – Retained CLP Regulation (EU) No. 1272/2008 as amended for Great Britain.
- h) EU CLP – consolidated up to M28 of 12th August 2021.

Version 3.0 Extends list of properties in Section 9.1 and adds a cover page with hyperlink navigation.

Version 2.1 revises the mask type recommendation in section 8.2.2 as the product does not contain respirable particles.

Version 2.0 replaces the original (M)SDS, version 1.0, from February 2018.

New SDS or revisions to comply with:

- a) REACH regulations up to and including Commission Regulation (EU) 2018/589 of 18th Apr 2018 (consolidated up to M48) and further amended by Commission Regulation (EU) 2018/675 of 2nd May 2018.
- b) CLP regulations up to and including Commission Regulation (EU) 2017/776 of 4th May 2017 (consolidated up to M14) and further amended by Commission Regulation (EU) 2017/542 of 22nd Mar 2017, Commission Regulation (EU) 2018/669 of 16th Apr 2018 and Commission Regulation (EU) 2018/1480 of 4th Oct 2018.
- c) Review of hazard classification with respect to known end use applications.

ii. Abbreviations and acronyms

REACH: Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals.

CLP: Regulation (EC) No 1272/2008 on the Classification, Labelling and Packaging of substances and mixtures.

WEL: 8 h TWA – Workplace Exposure Limit: 8 hour Time Weighted Average

iii. Key Literature References and Sources of Data

- a) Guidance Note EH40 Occupational Exposure Limits is published annually by the Health and Safety Executive. The latest relevant limits should be observed.
- b) HS(G) 37 1993 "An introduction to Local Exhaust Ventilation" and Guidance Note EH44 2013 "Dust in the Work Place" are both available from HM Stationery Office.
- c) Advice on respiratory protective equipment is also given in BS EN 529:2005.
- d) EN166: 2002 Personal Eye Protection.

iv. Procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 CLP

This material is not classified under this regulation.

v. Training Advice

All employees should be given adequate training in the proper use and handling of this product and any precautions and protective equipment required under applicable regulations

The information given on this Safety Data Sheet is to the best of AVD Fire's knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the users' responsibility to satisfy themselves as to the suitability and completeness of the information for their own particular use.