

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

1.1 Product identifier

Product name: **DM210 MICALITE BOARD ADHESIVE**
Substance: Mixture – See [Section 3.2](#).
EC No.: Not Applicable.
REACH Registration: Mixture of registered or exempt substances – See [Section 3.2](#)
CAS No.: Not Applicable.
Other names: Air-drying Adhesive, Refractory Adhesive.

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

Identified uses:

High temperature inorganic adhesive.
 Use restricted to professional user.

Uses advised against and reason:

Not suitable for underwater use or in steam autoclaves/ovens as the binders will deteriorate.

1.3 Details of the supplier of the safety data sheet

Supplier: Dupré Minerals Limited,
Address: Spencroft Road, Newcastle-under-Lyme, Staffordshire,
Postcode / Country: ST5 9JE / 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]:

Sodium silicate [Silicic acid, sodium salt, MR>3.2]
Skin corrosion/irritation, category 2 – H315: Causes skin irritation.
Serious eye damage/eye irritation, category 2 – H319: Causes serious eye irritation.

2.1.2 Additional Information

Sodium silicate in dry form, STOT SE3 – H335: May cause respiratory irritation.
[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)



Signal word: **Warning**

Hazard statement(s)

H315: Causes skin irritation.
 H319: Causes serious eye irritation.

Precautionary statement(s)

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P262: Do not get in eyes, on skin, or on clothing.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Information

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

2.3 Other hazards

Inhalable dust arising from the dried material may irritate the respiratory system and as such should be avoided.

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
Silicic acid, sodium salt [MR>3.2]	215-687-4	1344-09-8	20 - 30%	01-2119448725-31	H315: Skin Irritant C2 H319: Eye Irritant. C2
Water	231-791-2	7732-18-5		Exempt in accordance with Annex IV	Not classified
Natural and calcined minerals	N/A	N/A		Exempt in accordance with Annex V.7	Not classified

SECTION 4: First aid measures

4.1 Description of first aid measures

4.1.1 General Information:

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

4.1.2 Following inhalation:

If large amounts of dust from dried product are inhaled, remove exposed person to fresh air, keep warm and at rest. If breathing problems occur administer oxygen or CPR. Seek immediate medical attention.

4.1.3 Following skin contact:

Rinse cautiously with water for several minutes. Remove contaminated clothing. Seek medical advice / attention if irritation persists.

4.1.4 Following eye contact:

Immediately flush with clean water or eye wash solution, holding the eyelids apart for at least 15 minutes. If present and easy to do, remove contact lenses and continue rinsing. Seek medical advice / attention if irritation persists.

4.1.5 Following ingestion:

Do not induce vomiting. Wash out mouth thoroughly with water and give 200 to 300 ml of water to drink. Obtain medical attention if irritation persists.

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:

This product is alkaline.
Eye Contact: Likely to cause eye irritation.
Skin Contact: May cause skin irritation.

4.2.2 Symptoms and effects:

Mechanically generated dust from the dried product 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:

Treat symptomatically.

4.3.2 Notes for the doctor:

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 product from entering drains, sewers or watercourses.

6.3 Methods and material for containment and cleaning up

6.3.1 For containment:

Contain large spillages with a barrier of earth or sand and absorb spilled material in earth or expanded vermiculite.

6.3.2 For cleaning up:

Collect by shovelling / wet sweeping and transfer in to a suitable, labelled container.

6.3.3 Disposal and other information:

Clear spills immediately to reduce slip hazard.
Do not flush spillage to drain.
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.
- Avoid skin and eye contact.
- Avoid inhalation of dust from dried product.
- 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.
- Where dust is generated, the use of engineering measures (e.g. local dust extraction) is recommended to provide effective particulate control 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 regularly during use and after use.
- Do not eat, drink or smoke in working areas 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:

- Keep in original tightly sealed packaging.
- Protect packaging from damage.

7.2.2 Requirements for storage rooms and vessels:

- Store in a way to prevent any accidental damage.
- Protect against frost.
- Avoid temperatures below 5 °C.
- Recommended storage temperature is between 5 and 30 °C.
- Storage outside of these temperatures may reduce the shelf life of the product.

7.2.3 Further information on storage:

Provide an adequate bund wall to contain any spillages.

7.3 Specific end use(s)

Recommendations:

- Observe instructions for use. Use of this product is restricted to “professional user”.
- Please refer to [Section 8](#) and the relevant exposure scenario.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical Name	CAS No.	UK WEL: 8 h TWA inhalable (EH40)
Silicic acid, sodium salt	1344-09-8	No occupational exposure limit is assigned. An exposure limit of 2.0 mg m ⁻³ (15 min TWA) is recommended by analogy with sodium hydroxide

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

8.2.2 Individual protection measures:

- Hands:** Protective gloves e.g. EN374-3 level 6 breakthrough time > 480 min and barrier cream.
- Eyes:** Chemical Goggles e.g. EN 166.
- Skin:** Wear suitable protective clothing and gloves.
Wear suitable overalls, e.g. EN ISO 13982 (dust), EN14605 (liquid splashes).
- Respiratory:** In cases of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment that complies with European or national legislation i.e. Type FFP2.
- General:** 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 from dried material escaping to the atmosphere.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|--|---|
| a) Appearance: | Light brown/yellowish paste |
| b) Odour: | Nearly Odourless |
| c) Odour threshold: | No data available |
| d) pH: | Alkaline: 11 - 12 |
| e) Melting point/freezing point; | Melting point of dried product >1100 °C (Service Temperature) |
| f) Initial boiling point and boiling range: | > 100 °C (water) |
| g) Flash point: | Not applicable – Not flammable |
| h) Evaporation rate: | No data available |
| i) Flammability (solid, gas): | Not flammable |
| j) Upper/lower flammability or explosive limits: | Not flammable or explosive. |
| k) Vapour pressure (at 20 °C): | 23 mbar (water) |
| l) Vapour density: | No data available |
| m) Relative density: | Product bulk density approx. 1600 kg m ⁻³ |
| n) Solubility(ies): | Product is miscible with water |
| o) Partition coefficient: n-octanol/water: | No data available |
| p) Auto-ignition temperature: | No data available |
| q) Decomposition temperature: | No data available |
| r) Viscosity: dynamic at 20 °C: | 66 – 74 Pas |
| s) Explosive properties: | Not explosive |
| t) Oxidising properties: | No data available |

9.2 Other information

None available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not likely to react adversely if stored and handled as recommended.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

If used as recommended no hazardous reactions are to be expected.

10.4 Conditions to avoid

Protect against frost and drying up. Refer to [Section 7](#) for Storage Information.

10.5 Incompatible materials

Avoid contact with aluminium, zinc, tin and their alloys.

10.6 Hazardous decomposition products

None expected under normal conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

a) Acute Toxicity

LD50 rat (oral) 3400 mg kg⁻¹ (Data for Sodium Silicate; other components not classed as harmful)

LD50 rat (dermal) > 5000 mg kg⁻¹ (Data for Sodium Silicate; other components not classed as harmful)

LC50 rat (inhalative) > 2.06 g m⁻³ (Data for Sodium Silicate; other components not classed as harmful)

Mist is an irritant to the respiratory tract.

All symptoms of acute toxicity are due to high alkalinity.

b) Skin corrosion/irritation

Irritating to skin.

c) Serious eye damage/irritation

Risk of serious irritation to eyes.

d) Respiratory or skin sensitisation

Dust may cause minor transient respiratory irritation at high concentrations.

e) Germ cell mutagenicity

No known hazards.

f) Carcinogenicity

No known hazards.

g) Reproductive toxicity

No known hazards.

h) STOT-single exposure

Product not classified. *Sodium silicate in dry form* classified as STOT SE3 – H335: May cause respiratory irritation.

f) STOT-repeated exposure

Not classified. NOAEL oral (rat). >159 mg kg⁻¹ bw/d. (Data for Sodium Silicate; other components not classed as harmful)

g) Aspiration hazard

Not classified.

11.2 Information on likely routes of exposure

The most likely route for exposure is via skin contact.

11.3 Other information

None.

SECTION 12: Ecological information

12.1 Toxicity

LC50 96 hours Fish. 1108 mg l⁻¹ (Data for Sodium Silicate; other components not classed as harmful)

EC50 48 hours Aquatic. 1700 mg l⁻¹ (Data for Sodium Silicate; other components not classed as harmful)

12.2 Persistence and degradability

Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

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 Other adverse effects

The alkalinity of this material will have a local effect on ecosystems that are sensitive to changes in pH.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Dispose of this material and its container to a hazardous or special waste collection point.
- Sodium silicate is classified as hazardous waste under the EC Directive 2008/98/EC and as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No.894.
- This product should not be discharged to sewage treatment works.
- Please refer to European List to identify your appropriate European Waste Code (EWC) and ensure national and / or regional regulations are complied with.

SECTION 14: Transport information

14.1 UN 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

Unsuitable containers: Aluminium.

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

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)

Applicable.

Regulation (EC) No. 1907/2006 (Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH))

This product is classified as a mixture under REACH.

US FEDERAL REGULATIONS

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

GERMAN WATER HAZARD CLASSIFICATION VwVwS: (Sodium Silicate)

Product ID Number 1314, WGK class 1 (Low Hazard to water).

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 3.0 replaces the original (M)SDS, version 2.0, from March 2015.

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 regard to the latest upstream suppliers' SDS.
- d) Review of hazard classification with respect to known end use applications.
- e) Extends list of physical and chemical properties in Section 9.1.

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

Classified with reference to the latest upstream SDS and the current ECHA classification of the components identified in Section 3.

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 Dupré Minerals' 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.