SAFETY DATA SHEET

BENTONITE POWDER

CAS No.: 1302-78-9

This Safety Data Sheet is issued by Suraj Chemicals as the distributor/supplier of record, based on manufacturer and published GHS / regulatory reference data for this substance. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

GHS Product identifier

BENTONITE POWDER
Montmorillonite clay; aluminium phyllosilicate clay
CAS: 1302-78-9

Other means of identification

Not relevant

Recommended use of the chemical and restrictions on use

Relevant uses: Drilling fluid additive (oil & gas, geotechnical/water-well drilling), foundry sand bonding agent, civil engineering waterproofing/slurry walls, water and wastewater clarification, iron ore pelletizing, pet litter. For industrial/professional use only.

Uses advised against: All uses not specified in this section or in section 7.3.

Supplier's details

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), translated from the substance's established classification under Directive 67/548/EEC (Xi; R36/37/38 – irritating to eyes, respiratory system and skin).

Skin Irrit. 2	Skin irritation, Category 2, H315
Eye Irrit. 2	Eye irritation, Category 2, H319
STOT SE 3	Respiratory tract irritation, single exposure, Category 3, H335

GHS label elements, including precautionary statements

GHS: Warning

Hazard statements

H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.

Precautionary statements

P261: Avoid breathing dust.
P264: Wash skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313: If skin irritation occurs, get medical advice/attention.
P337+P313: If eye irritation persists, get medical advice/attention.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

Other hazards which do not result in classification

No additional information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Chemical description: Bentonite Powder (natural montmorillonite clay)

Identification	Chemical Name / Classification	Concentration
CAS: 1302-78-9	Bentonite – Skin Irrit. 2: H315; Eye Irrit. 2: H319; STOT SE 3: H335 – Warning	100%

To obtain more information on the hazards of the substance, consult sections 11, 12 and 16.

Mixtures

Non-applicable

4. FIRST AID MEASURES

Description of necessary first-aid measures	**By inhalation** Remove person to fresh air and keep comfortable for breathing. **By skin contact** Wash with plenty of water. **By eye contact** Rinse immediately with plenty of water. **By ingestion** Rinse mouth.
Most important symptoms/effects, acute and delayed	No additional information available beyond the irritation effects described in section 2.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	**Suitable:** Carbon dioxide, dry powder, foam, water spray. **Unsuitable:** Do not use a heavy water stream.
Specific hazards arising from the chemical	No additional information available; this is a non-combustible mineral product.
Special protective actions for fire-fighters	Do not enter the fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	**For non-emergency personnel** Evacuate unnecessary personnel. **For emergency responders** Equip cleanup crew with proper protection.
Environmental precautions	Avoid release to the environment.
Methods and materials for containment and cleaning up	Soak up spills with inert solids, such as clay or diatomaceous earth, as soon as possible. On land, sweep or shovel into suitable containers.
Reference to other sections	See sections 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Do not breathe dust. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in a well-ventilated place.
Specific end use(s)	No additional information available beyond the uses specified in section 1.2.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters	No specific occupational exposure limit is established for bentonite as supplied. General nuisance/inert dust limits (e.g., total dust ~10-15 mg/m³, respirable dust ~5 mg/m³, 8-hour TWA) are a commonly referenced general industrial hygiene benchmark. Note: the free crystalline silica content of bentonite deposits is grade/source dependent; consult Suraj Chemicals for the specific grade if a silica-specific exposure assessment is required.
Appropriate engineering controls	Provide local exhaust ventilation to control airborne dust. **C. Specific protection for the hands** Protective gloves. **D. Eye and face protection** Chemical goggles or safety glasses. **E. Bodily protection** Wear suitable protective clothing. **F. Respiratory protection** In case of inadequate ventilation, wear respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical state	Solid
Colour	Creamish brown
Odour	Odourless
Odour threshold	No data available
Product Description	
pH	6 – 9
Density	2.5 g/cm³
Solubility	Slightly soluble in water; swells and forms a viscous gel/suspension (typical swelling clay behaviour)
Volatility / Thermal	
Melting point	No data available
Boiling point	No data available
Flash point	No data available
Decomposition temperature	No data available
Relative vapour density at 20°C	No data available
Flammability	
Flammability (solid)	No data available (non-combustible mineral)
Auto-ignition temperature	No data available
Explosive limits	No data available

Other information

Explosive properties	No data available
Oxidising properties	No data available
Log Pow	No data available

10. STABILITY AND REACTIVITY

Reactivity No additional information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions No additional information available.

Conditions to avoid

Direct Sunlight	Air Contact	Moisture
Avoid	Avoid prolonged exposure	Avoid

Incompatible materials No additional information available.

Hazardous decomposition products No additional information available.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Effect	Classification
Acute toxicity	Not classified
Skin corrosion/irritation (pH 6-9)	Causes skin irritation (H315)
Serious eye damage/irritation (pH 6-9)	Causes serious eye irritation (H319)
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT – single exposure	May cause respiratory irritation (H335)
STOT – repeated exposure	Not classified
Aspiration hazard	Not classified

General note: prolonged inhalation of respirable mineral dust from natural clay deposits may pose a respiratory hazard depending on the free crystalline silica content of the specific deposit; this is grade/source dependent and not a substance-specific test result for this product.

12. ECOLOGICAL INFORMATION

Toxicity No additional information available.

Persistence and degradability No additional information available.

Bioaccumulative potential Not expected to bioaccumulate – natural inert mineral clay.

Mobility in soil No additional information available.

Results of PBT and vPvB assessment No additional information available.

Other adverse effects No additional information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods Dispose of contents/container in accordance with local, regional, national and/or international regulations. Not normally classified as hazardous waste when used as supplied.

14. TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR/RID)

14.1 UN number	–
14.2 UN proper shipping name	Not dangerous goods
14.3 Transport hazard class(es)	–
14.4 Packing group	–
14.5 Environmental hazard	No
14.6 Special precautions for user	No data available
14.7 Transport in bulk	Not relevant

Transport of dangerous goods by sea (IMDG)

14.1 UN number	–
14.2 UN proper shipping name	Not dangerous goods
14.3 Transport hazard class(es)	–
14.4 Packing group	–
14.5 Marine pollutant	No
14.6 Special precautions for user	No data available
14.7 Transport in bulk	Not relevant

Transport of dangerous goods by air (IATA)

14.1 UN number	–
14.2 UN proper shipping name	Not dangerous goods
14.3 Transport hazard class(es)	–
14.4 Packing group	–
14.5 Environmental hazard	No
14.6 Special precautions for user	No data available
14.7 Transport in bulk	Not relevant

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question Ensure all local, regional, national and/or international regulations are observed. Handle in accordance with the Factories Act, 1948 (as amended, 1987) for occupational dust exposure.

Chemical safety assessment A chemical safety assessment was not carried out for this product.

16. OTHER INFORMATION

Legislation related to safety data sheets

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3

H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual component which appears in section 3.

Advice related to training

Minimal training is recommended to prevent industrial risks for staff using this product, to facilitate comprehension of this safety data sheet and the product label.

Principal bibliographical sources

Manufacturer's Safety Data Sheet; well-established public GHS classification data for CAS 1302-78-9 (translated from EU Directive 67/548/EEC risk phrases R36/37/38).

Abbreviations and acronyms

CLP: Classification, Labelling and Packaging Regulation | DPD: Dangerous Preparations Directive (67/548/EEC) | STOT: Specific Target Organ Toxicity

Disclaimer: The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

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