

Material Safety Data Sheet (MSDS / SDS)

Guar Gum - Native Grades (Industrial/FH, Food Grade, Refined Split)

SECTION 1: Identification

Product Name	Guar Gum (Native, Unmodified)
Synonyms	Guar Gum, Guaran, Cluster Bean Gum, Guar Flour, Goma Guar, Guarkernmehl, Guar Split
CAS No.	9000-30-0
Recommended Use	Hydraulic fracturing fluid viscosifier (Industrial/FH grade); food thickener/stabiliser (Food Grade); feedstock for guar derivative manufacturing (Refined Split)
Manufacturer / Supplier	Ochnology Solution Pvt. Ltd., B-153, Sector-4 Defence Colony, Dehradun, Uttarakhand, India - 248001
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SECTION 2: Hazard(s) Identification

GHS Classification: Not classified as hazardous under GHS for acute health or environmental hazards based on available data. Combustible organic dust; documented respiratory sensitiser in occupational settings with repeated inhalation exposure.

Signal Word: None (not classified) - general good-handling-practice and combustible-dust precautions apply; occupational sensitisation caution applies (see below)

Hazard Statements:

- Not classified as a hazardous substance or mixture under GHS/CLP for acute health or environmental hazards based on available data
- Combustible organic dust - finely divided guar gum powder dispersed in air poses a genuine, well-documented combustible dust explosion hazard in bulk processing (guar gum processing facilities have experienced dust explosion incidents historically)

- Repeated occupational inhalation exposure to guar gum dust has been documented to cause respiratory sensitisation (occupational asthma/rhinitis) in processing and milling workers

Precautionary Statements:

- P210 – Keep away from heat, hot surfaces, sparks, open flames – No smoking
- P241 – Use explosion-proof electrical/ventilating/lighting equipment in dusty environments
- P261 – Avoid breathing dust
- P264 – Wash hands thoroughly after handling
- P271 – Use only outdoors or in a well-ventilated area
- P280 – Wear protective gloves/eye protection/respiratory protection

SECTION 3: Composition / Information on Ingredients

Component	CAS No.	Concentration (w/w)
Guar Gum (Galactomannan, native)	9000-30-0	80 – 100% (grade dependent, see TDS)
Protein / Moisture / Acid Insoluble Residue (residual)	–	Balance (grade dependent, see TDS)

SECTION 4: First-Aid Measures**Eye Contact**

Rinse with plenty of water for several minutes to remove dust particles. Seek medical attention if irritation persists.

Skin Contact

Wash with soap and water. Generally non-irritating; seek medical attention if irritation develops.

Inhalation

Move to fresh air. If coughing, wheezing or respiratory discomfort persists, seek medical attention – repeated occupational exposure to guar gum dust has been documented to cause respiratory sensitisation.

Ingestion

Rinse mouth with water. Not expected to be harmful in small amounts – guar gum is widely used as a food ingredient. Seek medical attention if a large quantity is ingested or discomfort occurs, and note that guar gum swells substantially on contact with water/gastric fluid.

SECTION 5: Fire-Fighting Measures

- Combustible organic solid; finely divided dust poses a genuine, documented combustible dust explosion hazard in confined processing spaces (silos, mills, pneumatic conveying) – this is a recognised risk in the guar gum processing industry
- Suitable extinguishing media: water spray/fog, foam, CO₂, dry chemical – avoid methods that disperse settled dust near an ignition source
- Fire-fighters should wear SCBA in enclosed or heavily smoke-logged conditions

SECTION 6: Accidental Release Measures

- Avoid generating dust during clean-up; use damp cleaning methods or HEPA-filtered vacuum where practical
- Wetted material becomes extremely slippery and swells substantially – clean spill area promptly to prevent a slip hazard and drain blockage
- Sweep or vacuum into suitable containers for reuse or disposal, keeping away from ignition sources

SECTION 7: Handling and Storage

- Avoid generating and inhaling dust; use local exhaust ventilation and dust-collection systems at bulk-handling points (milling, bag dumping, pneumatic conveying) – combustible dust and respiratory sensitisation precautions both apply
- Bond and ground equipment during bulk powder transfer to control static discharge
- Workers with pre-existing asthma or respiratory sensitisation should be medically evaluated before regular handling of bulk guar gum dust
- Store in a cool, dry, well-ventilated warehouse away from moisture – all grades are hygroscopic and swell/spoil if wetted

SECTION 8: Exposure Controls / Personal Protection

Occupational Exposure Limits

No universally harmonised specific OEL established for guar gum; treat as Particulates Not Otherwise Regulated (nuisance)

	dust), general reference 10 mg/m ³ total dust, 8-hr TWA, noting the documented respiratory sensitisation potential warrants conservative exposure control
Engineering Controls	Local exhaust ventilation, dust collection and explosion-proof equipment at all bulk-handling and milling process steps
Eye/Face Protection	Safety glasses or goggles recommended in dusty conditions
Hand Protection	General-purpose work gloves sufficient for routine handling
Respiratory Protection	Dust mask (N95 or equivalent) recommended in dusty conditions; higher-grade respiratory protection recommended for prolonged or high-concentration exposure at milling/processing facilities

SECTION 9: Physical and Chemical Properties

Property	Unit	Value
Appearance	–	White to cream/light tan powder or split form (grade dependent)
Odour	–	Faint, characteristic odour
Solubility in Water	–	Disperses and swells substantially in cold or hot water
pH (1% Solution)	–	5.5 – 7.5
Flash Point	–	Not applicable (solid); combustible dust hazard applies to fine powder

SECTION 10: Stability and Reactivity

- Stable under normal, dry conditions of storage, handling and use
- Hygroscopic – absorbs moisture and swells substantially in the presence of water; may support microbial growth if stored wet
- Combustible dust hazard when finely dispersed in air – avoid ignition sources during bulk handling, particularly in milling and processing facilities

- Incompatible materials: strong oxidising agents

SECTION 11: Toxicological Information

- Very low acute oral and dermal toxicity; guar gum is widely used and well established as a food ingredient (thickener/stabiliser) at food-grade purity
- Documented respiratory sensitiser in occupational settings – repeated inhalation exposure to guar gum dust in processing/milling facilities has been associated with occupational asthma and rhinitis
- Not classified as carcinogenic, mutagenic, or toxic to reproduction based on available information
- Industrial/Fast Hydration grade and Refined Split are not certified for food use unless separately verified against the applicable food-grade standard

SECTION 12: Ecological Information

- Not classified as hazardous to aquatic organisms under GHS criteria based on available data
- Readily biodegradable, consistent with its status as a natural plant-derived polysaccharide
- Large releases to waterways may temporarily increase biological oxygen demand (BOD) and cause fouling/blockage due to swelling – avoid unnecessary bulk release

SECTION 13: Disposal Considerations

- Dispose of product and packaging in accordance with local, state and national regulations
- Not expected to require classification as hazardous waste under standard criteria
- Avoid disposal to drains in bulk – substantial swelling on contact with water can cause blockages

SECTION 14: Transport Information

UN Number	Not applicable – not classified as Dangerous Goods
Proper Shipping Name	Not regulated for transport (IMDG / ADR / IATA / RID)
Transport Hazard Class	Not classified
Packing Group	Not applicable
Environmental Hazards	None identified under standard transport classification criteria

SECTION 15: Regulatory Information

- Guar gum is widely listed on major chemical/food inventories (TSCA, REACH, ECL, food additive codes such as E412) as an existing/registered/approved substance
- Buyers/importers should confirm labelling and inventory requirements applicable to their specific jurisdiction and end-use; food-grade certification, where required, must be separately verified for the relevant grade
- This SDS covers native (unmodified) guar gum across the Industrial/Fast Hydration, Food Grade and Refined Split grades referenced in the accompanying TDS documents – the hazard profile does not materially change across these three grades, only processing, mesh size and purity differ. Hydroxypropyl Guar (HPG), a chemically modified derivative with a distinct CAS number, is covered by a separate SDS

SECTION 16: Other Information

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This SDS has been compiled based on general industry data and knowledge for native (unmodified) guar gum products of this type as commercially supplied, covering Industrial/Fast Hydration, Food Grade, and Refined Split grades. It is intended as a general handling and safety guide and does not replace a batch-specific SDS from the manufacturing mill, which should be obtained and reviewed for each shipment where regulatory submission is required, particularly regarding combustible dust and respiratory sensitisation exposure controls at processing facilities.

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