

Material Safety Data Sheet (MSDS / SDS)

Dead Burned Magnesite (DBM) - All Grades (85% to 97%+ MgO)

SECTION 1: Identification

Product Name	Dead Burned Magnesite (Sintered Magnesite)
Synonyms	DBM, Sintered Magnesite, Dead Burned Magnesite, Periclase, Fused/Sintered MgO
CAS No.	1309-48-4
Recommended Use	Refractory raw material for magnesia-carbon bricks, refractory castables and high-temperature furnace/kiln linings
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. May cause mild irritation to eyes and respiratory tract as a nuisance dust; mildly alkaline in contact with moisture.

Signal Word: None (not classified) - general good-handling-practice precautions apply

Hazard Statements:

- Not classified as a hazardous substance or mixture under GHS/CLP for acute health or environmental hazards based on available data
- May cause mild, transient irritation to eyes and respiratory tract as a nuisance dust
- Mildly alkaline when in prolonged contact with moisture; may cause mild skin/eye irritation on repeated contact

Precautionary Statements:

- P264 – Wash hands thoroughly after handling

- P271 – Use only outdoors or in a well-ventilated area
- P280 – Wear protective gloves/eye protection
- P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses if present and easy to do; continue rinsing

SECTION 3: Composition / Information on Ingredients

Component	CAS No.	Concentration (w/w)
Magnesium Oxide (MgO, sintered)	1309-48-4	85.0 – 98% (grade dependent, see TDS)
SiO ₂ / Fe ₂ O ₃ / CaO / Al ₂ O ₃ (residual)	–	2-15% (combined, grade dependent)

SECTION 4: First-Aid Measures

Eye Contact	Rinse with plenty of water for several minutes to remove dust particles. Remove contact lenses if present. Seek medical attention if irritation persists.
Skin Contact	Wash with soap and water. Generally low-irritating; seek medical attention if irritation develops on repeated contact.
Inhalation	Move to fresh air. If coughing or respiratory discomfort from dust persists, seek medical attention.
Ingestion	Rinse mouth with water. Not expected to be harmful in small amounts; seek medical attention if a large quantity is ingested or discomfort occurs.

SECTION 5: Fire-Fighting Measures

- Non-flammable, non-combustible sintered inorganic mineral; does not itself burn or support combustion
- Suitable extinguishing media: use media appropriate to the surrounding fire
- No specific fire or explosion hazard associated with this product

SECTION 6: Accidental Release Measures

- Avoid generating dust during clean-up; use wet sweeping or vacuum with HEPA filtration where practical
- Sweep or vacuum into suitable containers for reuse or disposal
- Spilled granules can create a slip hazard on hard floors – clean promptly
- Wear appropriate PPE (dust mask, goggles) during clean-up of large spills

SECTION 7: Handling and Storage

- Avoid generating and inhaling dust; use local exhaust ventilation at dust-generating points (bag dumping, milling, blending)
- Avoid prolonged contact with eyes and skin as general good practice
- Store in a dry, covered area away from moisture and contamination
- Keep bags/containers closed when not in use
- Segregate different MgO grades clearly to avoid mix-up during storage and dispatch

SECTION 8: Exposure Controls / Personal Protection

Occupational Exposure Limits	OSHA PEL / ACGIH TLV for magnesium oxide fume/dust (as PNOR/PSLT particulate): general reference 10–15 mg/m ³ total dust, 8-hr TWA – confirm current jurisdiction-specific limit
Engineering Controls	Local exhaust ventilation at dust-generating 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 where airborne dust levels are elevated

SECTION 9: Physical and Chemical Properties

Property	Unit	Value
Appearance	–	Brown to light grey/white-grey dense granules or lumps (colour lightens with increasing MgO purity)
Odour	–	Odourless
Melting Point	°C	≈ 2,800 (periclase/MgO)
Bulk Density	g/cm ³	3.0 – 3.45 (grade dependent)
Solubility in Water	–	Practically insoluble; mildly alkaline in prolonged contact with moisture
Flash Point	–	Not applicable (non-flammable sintered solid)

SECTION 10: Stability and Reactivity

- Stable under normal conditions of storage, handling and use – sintering at very high temperature renders the material chemically low-reactivity compared to raw/caustic-calcined magnesite
- Practically insoluble in water; only mildly alkaline on prolonged moisture contact, unlike reactive (light-burned) magnesite
- Incompatible materials: strong acids (slow reaction over time)
- Hazardous decomposition products: none under normal conditions

SECTION 11: Toxicological Information

- Low acute oral and dermal toxicity based on published data for sintered magnesite
- May cause mild, transient irritation to eyes and respiratory tract as a nuisance dust
- Not classified as carcinogenic, mutagenic, or toxic to reproduction based on available information
- Confirm crystalline silica content via the batch COA if used in silica-regulated applications, given natural magnesite ore can carry silicate gangue minerals depending on source and grade

SECTION 12: Ecological Information

- Not classified as hazardous to aquatic organisms under GHS criteria based on available data
- Practically insoluble; low environmental mobility
- Avoid unnecessary large-scale release to waterways as general environmental good practice

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; confirm local requirements before disposal
- Empty bags may retain residual dust – handle and dispose of per label and local regulations

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

- Magnesium oxide is widely listed on major chemical inventories (TSCA, REACH, ECL, etc.) as an existing/registered substance
- Buyers/importers should confirm labelling and inventory requirements applicable to their specific jurisdiction and end-use
- This SDS covers all four DBM grades (85–88%, 90–92%, 94–96%, 97%+ MgO) referenced in the accompanying TDS documents – the hazard profile does not materially change with grade, only the impurity levels differ

SECTION 16: Other Information

Revision Date: 18 July 2026

This SDS has been compiled based on general industry data and knowledge for Dead Burned Magnesite (sintered magnesia) products of this type as commercially supplied, covering all grades from 85% to 97%+ MgO. 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.

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