

Material Safety Data Sheet (MSDS / SDS)

Cenospheres - Industrial Grade

SECTION 1: Identification

Product Name	Cenospheres (Hollow Alumino-Silicate Microspheres)
Synonyms	Cenospheres, Fly Ash Cenospheres, Hollow Ceramic Microspheres
CAS No.	Mixture - primarily alumino-silicate (SiO ₂ /Al ₂ O ₃); no single CAS applies
Recommended Use	Lightweight filler for construction, oil well cementing, syntactic foams and composite materials
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 contain trace crystalline silica; may cause mechanical irritation to eyes and respiratory tract as a nuisance dust.

Signal Word: None (not classified) - general dust-handling 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 contain trace crystalline silica - prolonged inhalation of respirable crystalline silica dust is associated with silicosis and is classified by IARC as Group 1 (carcinogenic to humans)
- May cause mechanical irritation to eyes and respiratory tract as a nuisance dust at high airborne concentrations

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)
Alumino-Silicate (SiO ₂ /Al ₂ O ₃ , hollow sphere form)	Mixture	> 90%
Fe ₂ O ₃ and other residual oxides	–	< 10% (combined)

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 non-irritating; seek medical attention if irritation develops.
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 inorganic mineral; does not itself burn or support combustion
- No specific fire or explosion hazard associated with this product
- Suitable extinguishing media: use media appropriate to the surrounding fire

SECTION 6: Accidental Release Measures

- Avoid generating dust during clean-up; use wet suppression or vacuum with HEPA filtration where practical
- Sweep or vacuum into suitable containers for reuse or disposal
- Spilled material 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
- Handle gently – excessive mechanical stress can fracture the hollow spheres, generating fine dust
- Store in a dry, covered area away from moisture and contamination
- Keep bags/containers closed when not in use

SECTION 8: Exposure Controls / Personal Protection

Occupational Exposure Limits	OSHA PEL / ACGIH TLV for nuisance dust (PNOR): 10–15 mg/m ³ total dust, 8-hr TWA. If respirable crystalline silica is confirmed present, the applicable silica PEL takes precedence
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 in dusty conditions

SECTION 9: Physical and Chemical Properties

Property	Unit	Value
Appearance	–	Grey to light grey free-flowing powder
Odour	–	Odourless
True Particle Density	g/cm ³	0.4 – 0.8
Bulk Density	g/cm ³	0.35 – 0.45
Solubility in Water	–	Insoluble
Flash Point	–	Not applicable (non-combustible inorganic solid)

SECTION 10: Stability and Reactivity

- Stable under normal conditions of storage, handling and use
- Chemically inert; does not react under normal ambient conditions
- Hazardous decomposition products: none under normal conditions
- No known significant incompatibilities under normal use

SECTION 11: Toxicological Information

- Low acute oral and dermal toxicity based on published data for alumino-silicate mineral fillers
- May contain crystalline silica; relevant primarily where the buyer processes this material in a manner generating significant respirable dust
- Not classified as carcinogenic (for the cenosphere material itself), mutagenic, or toxic to reproduction based on available information

SECTION 12: Ecological Information

- Not classified as hazardous to aquatic organisms under GHS criteria; chemically inert and insoluble

- No significant bioaccumulation potential
- 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 classified as hazardous waste under standard criteria
- Recoverable material – often reused/recycled given its value as a lightweight filler

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

- Alumino-silicate mineral fillers of this type are widely accepted under major chemical inventories (TSCA, REACH, ECL, etc.)
- Buyers/importers should confirm labelling and inventory requirements applicable to their specific jurisdiction and end-use

SECTION 16: Other Information

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This SDS has been compiled based on general industry data and knowledge for Cenospheres products of this type as commercially supplied. It is intended as a general handling and safety guide and does not replace a batch-specific SDS from the manufacturing source, which should be obtained and reviewed for each shipment where regulatory submission is required.

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