



Material Safety Data Sheet

1. Product Identification

Product Name: Silica Microsphere

Molecular Weight: Not available.

Chemical Formula: SiO₂

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Silica, amorphous	7631-86-9	100%	Yes

3. Hazards Identification

This product is synthetic amorphous silica, not to be confused with crystalline silica such as quartz, cristobalite or tridymite or with diatomaceous earth or other naturally occurring forms of amorphous silica that frequently contain crystalline forms.

Inhalation: May cause dryness and irritation to mucous membranes, nose, and throat. Symptoms may include coughing, sore throat, and wheezing.

Ingestion: No adverse effects expected.

Skin Contact: May cause irritation with dryness .

Eye Contact : May cause irritation, redness and pain.

Chronic Exposure: Repeated exposure may cause symptoms similar to those listed for acute effects. Synthetic amorphous silica does not produce silicosis.

Aggravation of Pre-existing Conditions: No information found.

4. First Aid Measures

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion : Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact: Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

www.spherescientific.com

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 7. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

7. Exposure control/Personal protection

Eye protection : Safety glasses with side shields are suggested.

Skin protection: Powder free latex or vinyl gloves are suggested.

Respiratory protection: Respiratory protection for dust and aerosol generation is recommended (e.g., NIOSH approved filtering dust mask).

Engineering controls: Use minimal and directional (away from the user) airflow to minimize worker exposure.

8. Handling and Storage

Keep in a tightly closed container. Protect against physical damage. When pouring into a container of flammable liquid, ground both containers electrically to prevent a static electric spark. Containers of this material may be hazardous when empty since they retain product residues (dust, solids).

9. Physical and Chemical Properties

Appearance: White powder.

Melting Point: 1610C (2930F)

Odor: Odorless.

Vapor Density (Air=1): Not applicable.

Solubility: Negligible

Vapor Pressure (mm Hg): Not applicable.

Specific Gravity: 1.9 to 2.3

Boiling Point: 2230C (4046F)

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Polymerization: Will not occur.

Incompatibilities: Reacts with hydrogen fluoride, fluorine, oxygen difluoride, chlorine trifluoride, strong acids, strong bases, and oxidizers.

Conditions to Avoid: Moisture, extreme heat, and incompatibles.

11. Toxicological Information

NTP Carcinogen:

Ingredient	Known	Anticipated	IARC Category
Silica Gel (7631-86-9)	No	No	None

Occupational exposure limits:

ACGIH TLV TWA for 8hours--- 10 mg/m³ (total dust)

OSHA PEL TWA for 8 hours --- 20 mppcf * or 80 mg/m³ (% SiO₂**)

www.sphrescientific.com

CalOSHA PEL TWA for 8 hours--- about 6mg/m³

* million particles per cubic foot

** The percentage of crystalline silica, SiO₂, is needed to determine the PEL in one OSHA approach.

12. Environmental Information

This material is not expected to be toxic to aquatic life.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.

14. Transport Information

HAZARD CLASS: Not classified per U.S. DOT or IATA.

UN NUMBER: Not assigned per U.S. DOT or IATA.

15. Other Information

No additional information.

Abbreviations

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

CalOSHA: Occupational Safety and Health Administration of California

TLV: Threshold Limit Value

TWA: Time Weighted Average

PEL: Permissible Exposure Limit

DOT: Department of Transportation

EU: European Union

The information contained herein is in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.