1. IDENTIFICATION OF SUBSTANCE

1.1 PRODUCT NAME(S)  Amorphous Silica Microspheres and Nanospheres
1.2 PRODUCT IDENTIFIER(S)  SiO2MS, SiO2NS
1.3 INTENDED USE  Industrial and research applications
1.4 SUPPLIER’S DETAILS  Cospheric LLC, PO Box 6762, Santa Barbara, CA 93160
info@cospheric.com  www.cospheric.com
1.5 EMERGENCY TELEPHONE  +1-805-687-3747 Monday-Friday, 08:00-17:00 PST [UTC-8]

2. HAZARDS IDENTIFICATION

2.1 HAZARD CLASSIFICATION  Not classified as a hazardous material.
2.2 LABEL ELEMENTS  None.
2.3 HAZARDS NOT OTHERWISE CLASSIFIED  Spilled material is extremely slippery. Dust may cause irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>CAS NUMBER</th>
<th>% (W/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide, amorphous</td>
<td>7631-86-9</td>
<td>&gt;99.9%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Eye contact  Rinse with plenty of water. Seek medical advice if symptoms persist.
Skin contact  If symptoms occur, wash with soap and water.
Inhalation  If symptoms occur, move to fresh air. Seek medical advice if necessary.
Ingestion  If symptoms occur, seek medical advice.

4.2 IMPORTANT SYMPTOMS/EFFECTS, ACUTE OR DELAYED

Inhalation of high concentrations of dust may cause respiratory irritation.

5. FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Use extinguishing measures that are appropriate to local circumstances and the surrounding fire.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

None known.

5.3 SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved) and full protective gear.

6. ACCIDENTIAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Follow precautions for safe handling described in this safety data sheet (Section 8).
6.2 ENVIRONMENTAL PRECAUTIONS
Dispose of any waste according to prescribed federal, state, local and competent authority guidelines.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP
Collect spillage with shovel, broom or the like. Transfer to a container for disposal.

7. HANDLING AND STORAGE
7.1 PRECAUTIONS FOR SAFE HANDLING
Avoid handling practices that cause dust formation. Avoid inhalation of high concentrations of dust. Observe occupational exposure limits and minimize the risk of inhalation of dust.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES
Store in tightly closed original container in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1 CONTROL PARAMETERS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA Permissible Exposure Limit (PEL)</td>
<td>0.8 mg/m³</td>
</tr>
</tbody>
</table>

*The OSHA PEL reported as 80 mg/m³ ÷ silica; 0.8 mg/m³ is the limit for 100% amorphous silica.*

8.2 ENGINEERING CONTROLS
Avoid handling practices that cause dust formation. Use local exhaust ventilation to prevent or control exposure.

8.3 INDIVIDUAL PROTECTION MEASURES (PERSONAL PROTECTIVE EQUIPMENT)
Respiratory protection: When handling practices cause dust formation, select respiratory protection appropriate for the particle size of the material.
Eye/face protection: Chemical goggles.
Skin protection: Wear suitable protective clothing and gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**: White solid spherical particles
- **Relative density**: Per product specification (1-2g/cc)
- **Softening Temperature**: Per product specification
- **Flammability**: Not classified as flammable.
- **Flammable limits**: Not-applicable
- **Auto-ignition temperature**: Not-applicable
- **Decomposition temperature**: No information available
- **Odor**: Odorless
- **Vapor pressure**: Not-applicable
10. STABILITY AND REACTIVITY

Reactivity
Non-reactive under normal conditions of use.

Chemical stability
Stable under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Likely route(s) of exposure
Dermal, inhalation

SIGNS AND SYMPTOMS OF EXPOSURE

Eye contact
Direct contact with eyes may cause temporary mechanical irritation. Signs and symptoms may include pain, redness.

Skin contact
Direct contact with skin may cause sensitization in hypersensitive individuals. Signs and symptoms may include redness, pain and itching.

Inhalation
Inhalation above recommended exposure levels may cause respiratory irritation including cough.

Ingestion
No harmful effects expected in amounts likely to be ingested by accident. May cause discomfort if swallowed.

TOXICOLOGICAL DATA

Acute toxicity
Oral LD₅₀>5000 mg/kg (rat)
4-hour LC₅₀>0.14mg/L (rat)

Skin corrosion/irritation
Non-irritating (rabbit)

Serious eye damage/eye irritation
Non-irritating (rabbit)

Respiratory or skin sensitization
No information available/not sufficient for classification

Germ cell mutagenicity
Not mutagenic (in vitro and in vivo)

Carcinogenicity
Not listed as a carcinogen (OSHA, NTP, IARC)

Reproductive toxicity
No information available/not sufficient for classification

STOT-single exposure
No information available/not sufficient for classification

STOT-repeated exposure
No information available/not sufficient for classification

Aspiration hazard
No information available/not sufficient for classification
AMORPHOUS SILICA MICROSPHERES AND NANOSPHERES

12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Category</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>No information available</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>No information available</td>
</tr>
<tr>
<td>Bioaccumulation potential</td>
<td>No information available</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>No information available</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Dispose of any waste according to prescribed federal, state, local and competent authority guidelines.

14. TRANSPORTATION INFORMATION

This product is not subject to regulations for the transport of hazardous materials (DOT, IATA, IMO).

15. REGULATORY INFORMATION

This SDS has been prepared to meet the US OHSA Hazard Communication Standard, 29 CFR 1910.1200.

16. OTHER INFORMATION

The information contained in this document is correct to the best of our knowledge at the date of publication. It should not be viewed as all inclusive, but as a guide only. It does not represent any guarantee of the properties of the product. Cospheric LLC shall not be held liable for any damage resulting from handling of or from contact with the above product. For these reasons, it is important that product users carry out their own tests to satisfy themselves as to the suitability of the safety precautions for their own intended applications.

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