1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: GLASS BEADS: 1.9 INDEX OF REFRACTION
Product description: Spherical glass beads
Manufacturer: Flex-O-Lite
An affiliate of PQ Corporation
50 Crestwood Executive Drive
St Louis, MO 63126 USA

Telephone: 800-325-9525
In case of emergency call: 800-325-9525
For transportation emergency Call CHEMTREC: 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical and Common Name</th>
<th>CAS Registry Number</th>
<th>Wt. %</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass Oxide; Barium</td>
<td>65997-17-3</td>
<td>&gt;99%</td>
<td>15mg/m³ total</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Titanate Glass:</td>
<td></td>
<td></td>
<td>dust, 5mg/m³ respirable</td>
<td>inhalable,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 mg/m³ respirable</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview: Noncombustible off white/amber glass beads. Spilled material is extremely slippery.

Eye contact: Mildly irritating to the eyes.
Skin contact: Slightly irritating to skin.
Inhalation: May cause irritation.
Ingestion: No known hazard.
Chronic hazards: No known chronic hazards. Not listed by NTP, IARC or OSHA as a carcinogen.
Physical hazards: Spilled material is extremely slippery.
4. FIRST AID MEASURES

**Eye:**
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

**Skin:**
In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Inhalation:**
None required.

**Ingestion:**
None required.

5. FIRE FIGHTING MEASURES

**Flammable limits:**
This material is noncombustible.

**Extinguishing Media:**
This material is compatible with all extinguishing media.

**Hazard to fire-fighters:**
See Section 3 for information on hazards when this material is present in the area of a fire.

**Fire-fighting equipment:**
The following protective equipment for fire fighters is recommended when this material is present in the area of a fire: rubber boots with slip-resistant soles.

6. ACCIDENTAL RELEASE MEASURES

**Personal protection:**
Wear rubber boots with slip-resistant soles, and NIOSH-approved dust respirator where dust occurs. See section 8.

**Environmental Hazards:**
Sinks in water. No known hazard to aquatic life.

**Small spill cleanup:**
Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Use appropriate Personal Protective Equipment (PPE). See section 8.

**Large spill cleanup:**
Keep unnecessary people away; isolate hazard area and deny entry. Do not walk through spilled material. Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Use appropriate Personal Protective Equipment (PPE). See section 8.

**CERCLA RQ:**
There is no CERCLA Reportable Quantity for this material.

7. HANDLING AND STORAGE

**Handling:**
Avoid contact with eyes, skin and clothing. Avoid breathing dust. Keep container closed. Promptly clean up spills.

**Storage:**
Keep containers closed. Store in clean metal, fiber or plastic containers.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Use with adequate ventilation. Keep containers closed. Safety shower and eyewash fountain should be within direct access.


Skin protection: Wear body-covering protective clothing.

Eye protection: Wear safety glasses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Glass bead.
Color: Off white/Amber.
Odor: Odorless.
pH: Not applicable.
Specific gravity: Approximately 4.2 g/cm³
Solubility in water: Insoluble.

10. STABILITY AND REACTIVITY

Stability: This material is stable under all conditions of use and storage.
Conditions to avoid: None.
Materials to avoid: Dissolves in hydrofluoric acid.
Hazardous decomposition products: None known.

11. TOXICOLOGICAL INFORMATION

Acute Data: When tested for primary irritation potential, this material caused mild irritation to the eyes and slight irritation to the skin.
The acute oral toxicity of this product has not been tested. A similar material was nontoxic to rats at 5,000 mg/kg. All animals survived, gained weight and appeared active and healthy. There were no signs of gross toxicity, adverse pharmacologic effects or abnormal behavior.

Subchronic Data: There are no known reports of subchronic toxicity of nonfibrous glass.
Special Studies: There are no known reports of carcinogenicity of nonfibrous glass.
Nonfibrous glass is not listed by IARC, NTP or OSHA as a carcinogen.
12. ECOLOGICAL INFORMATION

Eco toxicity: There are no known reports of ecotoxicity of nonfibrous glass.
Environmental Fate: This material is persistent but inert in aquatic systems. It will not
bioconcentrate up the food chain.
Physical/Chemical: Sinks in water. Insoluble in water.

13. DISPOSAL CONSIDERATIONS

Classification: Disposed material is not a hazardous waste.
Disposal Method: Dispose in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT UN Status: This material is not regulated hazardous material for transportation.

15. REGULATORY INFORMATION

CERCLA: No CERCLA Reportable Quantity has been established for this material.
SARA TITLE III: Not an Extremely Hazardous Substance under §302 Not a Toxic
Chemical under §313.
TSCA: All ingredients of this material are listed on the TSCA inventory.

16. OTHER INFORMATION

Prepared by: John G. Blumberg
Supersedes revision of: 09/02/99

THE INFORMATION ON THIS SAFETY DATA SHEET IS BELIEVED TO BE ACCURATE AND IT IS THE BEST
INFORMATION AVAILABLE TO FLEX-O-LITE. THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE
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