SAFETY DATA SHEET- GLASS BEADS

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IDENTIFICATION

Product name: Glass Beads
Synonyms: Glass Spheres, Microspheres, Abrasive Blasting Media
Product Use: Surface Preparation, Reflective Road Markings
Restrictions On Use: No Information Available.
Formula: SiO₂ / Na₂O / CaO / MgO / Al₂O₃
Supplier: Alchemy Mineral LLC
1101 2nd Ave Unit 4
Dayton, KY 41074
Emergency Number: 859-609-0743
Fax: 859-689-1401
Web: https://alchemymineral.com/
HAZARDS IDENTIFICATION

GHS Classification:
Classification of the substance or mixture
Glass beads are not considered to be hazardous by the EPA under 29 CFR 1910.1200 and the Federal Register, Vol. 51, No. 221, pp 41582-41594. The RCRA status in unused material is not hazardous according to the list of CERCLA chemical.
It is not on the toxic chemical list in the Committee Print Number 99-169.
Classification according to Regulation (EC) No 1272/2008 (CLP)
This mixture does not meet the criteria for classification in accordance with Regulation No. 1272/2008/EC.
Classification according to Directive 1999/45/EC (DPD)
This mixture does not meet the criteria for classification in accordance with Directive 1999/45/EC.

GHS LABEL:
Labeling according to Regulation (EC) No 1272/2008 (CLP)
Not required

Signal Word: Warning

Hazard Statement: Dust can cause irritation to the cornea and conjunctiva. Causes mild skin irritation. Localized redness, pruritus and/or pain. May cause irritation by the inhalation of dust.

Precautionary Statement: Overexposure may cause temporary respiratory irritation. The product enters directly through the oral or nasal cavity.

COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Silicon Dioxide (SiO₂)</th>
<th>Sodium Oxide (Na₂O)</th>
<th>Calcium Oxide (CaO)</th>
<th>Magnesium Oxide (MgO)</th>
<th>Aluminum Oxide (Al₂O₃)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (%)</td>
<td>68-75</td>
<td>12-18</td>
<td>7-12</td>
<td>0-5</td>
<td>0-2.5</td>
</tr>
</tbody>
</table>
FIRST AID MEASURES

Eyes: Immediately rinse with plenty of water for at least 15 minutes. Eyelids are to be held open. Seek medical attention if irritation persists.

Skin: Wash contaminated skin with plenty of water. Seek medical attention if irritation effects develop or persist.

Inhalation: Move individual to fresh air. Seek medical attention if health effects develop or persist.

Swallowed: Immediately rinse mouth with water. Repeat until product is thoroughly removed. Make sure the individual has water to drink. Seek medical attention if effects develop or persist.

First Aid Facilities: Safety shower and eye wash facilities nearby.

FIRE-FIGHTING MEASURES

Fire or Explosion Hazard: Solid, non-combustible glass bead. Electrostatic discharges may occur when pumping / transferring / pouring the dry powder.

Extinguishing Media: Any extinguishing media suitable for the surrounding area.

Combustion Product Hazards: No hazardous combustion products.

Advice For Fire Fighters: Extinguish preferably with dry chemical, foam or water spray. Spilled material is extremely slippery: Wear rubber boots with slip-resistant soles.

ACCIDENTAL RELEASE MEASURES

Emergency: No special requirements.

Procedures: Place spillages in clean labeled containers for reuse, recycling or disposal. See Section 13 for Disposal Considerations.

Special Issues: Spilled material may be a slipping hazard.

HANDLING AND STORAGE

Safe Handling: Keep container closed. Use only in well ventilated areas. Promptly clean up any spills or residues.

Safe Storage: Keep containers closed at all times. Store in original containers or in clean metal or plastic containers and keep dry.
8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Design and Engineering Control Measures:** Use in well ventilated area. Avoid generating and inhaling dust. When transferring the product consider the potential for electrostatic charge build up and the need to dissipate those charges.

**Personal Protective Equipment:** For the as-supplied 100µm to 5mm glass beads: No special requirements. For protection against dusts formed when used as a blasting media: Avoid skin and eye contact. Avoid inhaling the dust. Follow normal industrial safety practices. The use of protective clothing and equipment depends on the degree and nature of exposure. The following personal protective equipment should be used: (1) Safety glasses, goggles or faceshield as appropriate. (2) Plastic, Rubber, Leather or Cotton gloves as appropriate. (3) Safety boots. (4) Overalls, splash apron or similar protective apparel. (5) Respiratory protection to AS1715/1716 when dusts levels are present. Wash contaminated clothing and protective equipment before storing and re-using. The use of barrier cream is recommended to minimise the skin drying effects of this material.

9 PHYSICAL AND CHEMICAL PROPERTIES

- **Formula:** SiO₂ / Na₂O / CaO (fused ingredients general formulae, no added heavy metal oxides)
- **Boiling Point:** Not Determined
- **Melting Point:** > 600°C (softens)
- **Specific Gravity (H₂O = 1):** 2.4 - 2.6
- **Bulk Density:** approx. 1.5 g/cm³ (depending on grain size)
- **Percent Volatile:** < 0.5%
- **Solubility:** Rate of solubility is dependant on environment. Presences of alkali accelerate dissolution particularly above a pH of 9.
- **pH:** 7 to 9 (of a 5% slurry when left for several hours - estimated)
- **Appearance / Odor:** Large particle size white powder, from 100mm to 5mm smooth spheres, with no odor.

10 STABILITY AND REACTIVITY

- **Chemical Stability:** Stable.
- **Conditions To Avoid:** Dust cloud formation.
- **Incompatible Materials:** None. Strong bases may eventually dissolve the glass microspheres. Hydrofluoric Acid solutions will readily dissolve these glass microspheres.
- **Unsuitable Container:** None in particular.
- **Hazardous Reactions:** None known.
**TOXICOLOGICAL INFORMATION**

Eye: No eye irritation.

Skin: No skin irritation.

Oral Toxicity: When a similar product was tested for acute oral toxicity to rats at a dosage level of 500 mg/kg body weight, all animals survived and gained weight.

Respiratory Toxicity: No Inspirable / Respirable Fraction (as supplied spheres) For Dusts Formed when used as a Blasting Media: When a similar product was tested for respiratory toxicity in a 6-month intratracheal study in rats, no mortalities, untoward reactions, or observations correlated with exposure to the product. Minimal multifocal inflammation of the lung occurred in 90% of males and 80% of females. No appreciable increase in fibrous tissue was present in these lesions.

Carcinogenic Effects: Not listed as a Carcinogen by the WHO IARC, USA NTP or USA OSHA. Note: Contains no free crystalline silica. All components are amorphous (non-crystalline).

**ECOLOGICAL INFORMATION**

General: Avoid contaminating waterways. Not expected to be an environmental hazard provided glass oxides do not contain added heavy metals. May physically block systems.

Ecotoxicity Data: No data available. Not expected to be harmful to the environment.

Mobility: Sinks in water. Immobile in soil.

**DISPOSAL CONSIDERATIONS**

Disposal Methods & Containers: Disposal to be in accordance with Local, State & Federal EPA waste regulations. Suitable for disposal at approved landfills. Avoid releasing dust.

Landfill, Incineration: May be landfilled. Not suitable for incineration.

**TRANSPORT INFORMATION**

Not classified as dangerous for transport.
REGULATORY INFORMATION

EU Regulations

Authorizations And/or Restrictions on Use: Consult the supplier.
European Union (Einecs/Elincs): All chemicals listed.
German WGK Number: Not available.

USA Regulations

TSCA (Toxic Substance Control Act): Listed.
SARA 311/312 - Hazard Categories: No data.
SARA 302 - Extremely Hazardous Substances: Not hazardous.
SARA 313 - Toxic Chemicals: Not toxic.
CERCLA (Comprehensive Environmental Response Compensation & Liability Act): Not established.
CAA (Clean Air Act 1990): No data.
CWA (Clean Water Act): No data.

KEY

CAS #: Chemical Abstracts Service Registry Number
UN No.: United Nations dangerous Goods Number
CDTA: Chemical Drug and Trafficking Act
SARA: Superfund Amendments and Reauthorization Act
TSCA: Toxic Substances Control Act
WHMIS: Workplace Hazardous Material Information System

NOTICE

This SDS summarizes, to our best knowledge at the date of issue, the chemical, health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Alchemy Mineral LLC cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact Alchemy Mineral LLC at the contact details on page 1.

Alchemy Mineral LLC’s responsibility for the material as sold is subject to its terms and conditions of sale, a copy of which is available upon request.