SAFETY DATA SHEET

GEOSPRAY®, GEOSPRAY® 61, GEOSPRAY® HCE, GEOSTRONG™, GEOROC® GEOPOLYMER MORTARS

Section 1. Product and Company Identification

Product Name: GeoSpray® 61, GeoSpray® HCE, GeoRoc® Geopolymer Mortars
Suppliers: GeoTree Solutions | 1733 Majestic Rd, Suite 101, Lafayette, CO 80026 | +1 855.655.6750, Emergency Phone Number: 800.424.9300 (CHEMTREC) +1 703.741.5970 (Outside the US)
Product Description: Geopolymer cements intended for structural rehabilitation of sewers, storm and water piping, concrete and other infrastructure
Product Use: Repairs
Chemical Name or Synonym: N/A

Section 2. Hazards Identification

Classification of the substance or mixture
Skin Corrosion/irritation – Category 2
Sensitization/skin – Category 1B
Eye damage/irritation – Category 1
Carcinogenicity – Category 1
Specific target organ toxicity (single exposure) – Category 3
Specific target organ toxicity (repeated exposure) Category 1

Label Elements:

Hazard Statements:
H315 – Causes skin irritation
H317 – May cause an allergic skin reaction
H318 – Causes serious eye damage
H335 – May cause respiratory irritation (Inhalation)
H350 – May cause cancer (Inhalation)
H372 – Causes damage to organs (lung) through prolonged or repeated exposure (inhalation)

Signal Word: Danger
Precautionary Statements:
P264 – Wash hands and forearms thoroughly after handling
P304+P340 – IF INHALED™ Remove person to fresh air and keep comfortable for breathing.
P302+P352 IF ON SKIN: Wash with plenty water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: If exposed or concerned: Get medical advice/attention.
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Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushed Stone or Gravel</td>
<td>N/A</td>
<td>40-60%</td>
</tr>
<tr>
<td>Metal Slag</td>
<td>65996-69-2</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Portland Cement</td>
<td>65997-15-1</td>
<td>&lt;15%</td>
</tr>
<tr>
<td>Fly Ash</td>
<td>68131-74-8</td>
<td>&lt;15%</td>
</tr>
<tr>
<td>Crystalline Silica</td>
<td>14808-60-7</td>
<td>&lt;20%</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

First Aid Measures for Accidental:
Inhalation: If breathing is difficult, give oxygen. Get medical attention if any discomfort continues.
Ingestion: If swallowed, rinse mouth with water (only if the person is conscious). Get medical attention if any discomfort continues.
Eye contact: In the event of contact with the eyes, rinse thoroughly with clean water. Continue to rinse for at least 15 minutes and seek medical attention.
Skin contact: Wash the skin immediately with soap and water. Take off immediately all contaminated clothing. If skin irritation or an allergic skin reaction develops, get medical attention.

Most important symptoms/effects, acute and delayed:
Inhalation: Dust irritates the respiratory system and may cause coughing and difficulties in breathing.
Eye contact: Dust may be irritating to the eyes and respiratory tract and may cause a low-level inflammatory response in the lungs. Not known to cause permanent injury to eye tissue.
Skin Contact: Severely irritating to skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Ingestion: Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract.

Indication of immediate medical attention and special treatment needed: Treat symptomatically.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media: Water fog. Alcohol resistant foam. Dry chemical. Carbon dioxide or dry powder.
Unsuitable Extinguishing Media: No data available
Special Fire Fighting Procedures: Wear complete firefighting gear and self-contained breathing apparatus to protect against potential harmful and/or irritating fumes. Use water to keep fire exposed containers cool. Do not use high volume water jet on the fire as this may spread the area of the fire.
Special Protective Equipment for Fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Specific Hazards Arising from the substance or mixture: No data available

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate personal protective equipment. The risk of inhalation of dust must be minimized as much as possible.
Environmental Precautions: Material should not be released into the environment. Prevent product from entering drains.
Methods and Materials for Containment and Cleaning Up: Dam and absorb spillages with sand, earth or other non-combustible material. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labeled container. All waste materials should be packaged, labeled and transported in accordance with all national, state/provincial, and local requirements.

Section 7. Handling and Storage

Precautions for safe handling: No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash promptly with soap and water if skin becomes contaminated. Practice good housekeeping. Avoid conditions which create dust.

Conditions for safe storage including any incompatibilities: Keep containers tightly closed. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures.

Section 8. Exposure Controls / Personal Protection

Control Parameters (Exposure Limits): No Data Available

Appropriate Engineering Control: Ventilation must be adequate for most operations. Protection against nuisance dust must be used when the general level exceeds 10 mg/m³.

Personal Protective Equipment:
Respiratory Protection: Wear dust masks in dusty areas. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Eye / Face Protection: Wear necessary protective equipment. Avoid contact with eyes and prolonged skin contact.
Skin Protection: Wear suitable protective clothing as protection against splashing or contamination. Wash promptly with soap and water if skin becomes contaminated. Protective gloves should be used if there is a risk of direct contact or splash. Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves. Wear rubber boots. Wear appropriate clothing to prevent repeated or prolonged skin contact.
Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Additional protective measures:

Section 9. Physical and Chemical Properties

Physical State: Solid, Powder
Colour: Grey
Odor: None
Melting Point/ Freezing Point: No data available
Boiling point: No data available
Flammability (solid, gas): No data available
Lower and Upper Explosion limits/
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability Limits:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition Temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>pH:</td>
<td>10-13 Aqueous suspensions</td>
</tr>
<tr>
<td>Kinematic Viscosity:</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility:</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate (ether=1):</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability Limits in Air:</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in other solvents:</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour Pressure:</td>
<td>No data available</td>
</tr>
<tr>
<td>Density and/or Relative Density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Vapour Density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>No data available</td>
</tr>
<tr>
<td>Particle Characteristics:</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous reactions: Product reacts with water and will generate heat.

Conditions to Avoid: No data available

Incompatible Materials / Chemicals: No data available

Hazardous Decomposition Products: No data available

Section 11. Toxicological Information

Information in the likely route of exposure:

Potential Acute Health Effects:
Skin contact: Irritating to skin.
Eye contact: Irritating to eyes.

Symptoms related to the physical, chemical and toxicological characteristics:

Target organs: No data available
Mutagenicity: No data available
Carcinogenicity: May cause cancer (Inhalation)
Reproductive Toxicity: No data available
Tetragenicity: No data available

Specific Target Organ Toxicity - single exposure (STOT-se): May cause respiratory irritation (Inhalation).
Specific Target Organ Toxicity - repeated exposure (STOT-re): Causes damage to organs (lung) through prolonged or repeated exposure (inhalation).

Over-exposure signs / symptoms: No data available

Delayed and immediate effects and also chronic effects from short and long-term exposure:
Short term exposure: No data available.
Long term exposure: No data available
Numerical measures of toxicity: No data available

**Section 12. Ecological Information**

Ecotoxicity: No determined  
Persistence and degradability: No determined  
Bioaccumulative potential: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).  
Mobility in soil: No determined  
Other adverse effects: No determined

**Section 13. Disposal Considerations**

Waste treatment methods: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.  
Uncleaned packaging: Do not re-use empty containers for food, clothing, or products for human or animal consumption, or where skin contact can occur. Dispose of container and unused contents in accordance with federal, state, and local regulations.

**Section 14. Transport Information**

ADR: Not dangerous goods  
IATA: Not dangerous goods  
IMDG: Not dangerous goods  
RID: Not dangerous goods

**Section 15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

USDOL-OSHA Hazard Communication Rule, 29 CFR 1910.1200: Ready mix concrete/cement/geopolymer is considered a hazardous chemical and should be part of any hazard communication program.

SARA (Title III), Sections 311 and 312: Ready mix concrete/cement/geopolymer qualifies as a hazardous substance with delayed health effects.

TSCA inventory list: Substances in Ready Mix Concrete/cement/geopolymer are on the TSCA inventory list.

Federal Hazardous Substance Act (USA): Ready mix concrete/cement/geopolymer is considered a hazardous substance under the Federal Hazardous Substance Act.

California Proposition 65: This product contains chemicals (trace metals) known to the State of California to cause cancer, birth defects, or other reproductive harm. California law requires the manufacturer to give the above warning in the absence of definitive testing to prove the defined risks do not exist.
Hazardous Products Act: Portland cement is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS).

This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

Candidate List of Substances of Very High Concern for Authorization: This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Major Accident Hazard: 96/82/EC Update: 2003
Legislation: Directive 96/82/EC does not apply

Notification status:
US. TSCA: On TSCA Inventory
DSL: This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.
AICS: Not in compliance with the inventory
NZIoC: Not in compliance with the inventory
ENCS: On the inventory, or in compliance with the inventory
KECI: Not in compliance with the inventory
PICCS: Not in compliance with the inventory
IECSC: On the inventory, or in compliance with the inventory

Section 16. Other Information

Key Legend Information:
CAS – Chemical Abstracts Service
OSHA – Occupational Safety and Health Administration
NIOSH – National Institute for Occupational Safety and Health

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