Safety Data Sheet  Type IS Cement

Section 1. Identification

GHS product identifier: Portland slag cement
Chemical name: Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum make up the majority of this product.
Other means of identification: Slag cement, Portland blast-furnace slag cement, Type IS, Blended hydraulic cement, CSA Type GUb, GULb, MSb, MSLb, HEb, HELb, LHb, LHLb, HSb, HSLb
Relevant identified uses of the substance or mixture and uses advised against: Building materials, construction, a basic ingredient in concrete.

Supplier’s details: 300 E. John Carpenter Freeway, Suite 1645
Irving, TX 75062
(972) 653-5500

Emergency telephone number (24 hours): CHEMTREC: (800) 424-9300

Section 2. Hazards Identification

Overexposure to portland slag cement can cause serious, potentially irreversible skin or eye damage in the form of chemical (caustic) burns, including third degree burns. The same serious injury can occur if wet or moist skin has prolonged contact exposure to dry portland slag cement.

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture:
- SKIN CORROSION/IRRITATION – Category 1
- SERIOUS EYE DAMAGE/EYE IRRITATION – Category 1
- SKIN SENSITIZATION – Category 1
- CARCINOGENICITY/INHALATION – Category 1A
- SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] – Category 3

GHS label elements

Hazard pictograms:

Signal word: Danger
Hazard statements: Causes severe skin burns and eye damage
May cause an allergic skin reaction
May cause respiratory irritation
May cause cancer

Precautionary statements:
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust. Use outdoors in a well ventilated area. Wash any exposed body parts thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated clothing must not be allowed out of the workplace.
Response: If exposed or concerned: Immediately get medical advice/attention if you feel unwell or irritation or rash occurs. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. If inhaled: Remove person to fresh air and keep comfortable for breathing. If swallowed: Rinse mouth. Do not induce vomiting.
Storage: Restrict or control access to stockpile areas (store locked up). Engulfment hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bulk truck or other storage container or vessel that stores or contains portland slag cement without an effective procedure for assuring safety. Store in a well ventilated area. Keep container tightly closed.
Disposal: Dispose of contents/container in accordance with local/regional/national/international
Hazards not otherwise classified (HNOC):

None known

Supplemental Information:

Respirable Crystalline Silica (RCS) may cause cancer. Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC and NTP; ACGIH states that it is a suspected cause of cancer. Other forms of RCS (e.g., tridymite and cristobalite) may also be present or formed under certain industrial processes.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture
Chemical Name: Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum make up the majority of this product.

CAS number/other identifiers

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement</td>
<td>&lt; 95%</td>
<td>65997-15-1</td>
</tr>
<tr>
<td>Slags</td>
<td>&gt; 5%</td>
<td>65996-69-2</td>
</tr>
</tbody>
</table>

The structure of blended portland slag cement may contain the following in some concentration ranges:

- Calcium oxide: A-B 1305-78-8
- Quartz: C-D 14808-60-7
- Hexavalent chromium*: E-F 18450-29-9

*Hexavalent chromium is included due to dermal sensitivity associated with the component.

Blended portland slag cement also contains gypsum, limestone and magnesium oxide in various concentrations. However, because these components are not classifiable as a hazard under Title 29 Code of Federal Regulations 1910.1200, they are not required to be listed in this section.

Gypsum: G-H 13397-24-5
Limestone: I-J 1317-65-3
Magnesium oxide: K-L 1309-48-4

Any concentration shown as a range is to protect confidentiality or is due to process variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye Contact: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation: Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of portland slag cement requires immediate medical attention. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If the individual is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in a recovery position and get medical attention immediately. Maintain an open airway.

Skin Contact: Get medical attention immediately. Heavy exposure to portland slag cement dust, wet concrete or associated water requires prompt attention. Quickly remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Quickly and gently blot or brush away excess portland slag cement. Immediately wash thoroughly with lukewarm, gently flowing water and non-abrasive pH natural soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposures to wet portland slag cement, portland slag cement mixtures or liquids from wet portland slag cement. Burns should be treated as caustic burns. Portland slag cement causes skin burns with little warning. Discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the...
burn until hours after the exposure. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure.

**Ingestion:**
Get medical attention immediately. Call a poison center or physician. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING unless directed to do so by medical personnel. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Have victim drink 60 to 240 mL (2 to 8 oz.) of water. Stop giving water if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

### Most important symptoms/effects, acute and delayed potential acute health effects

- **Eye contact:** Causes serious eye damage.
- **Inhalation:** May cause respiratory irritation.
- **Skin contact:** Causes severe burns. May cause an allergic skin reaction.
- **Ingestion:** May cause burns to mouth, throat and stomach.

### Over-exposure signs/symptoms

- **Eye contact:** Adverse symptoms may include the following: pain, watering and redness
- **Inhalation:** Adverse symptoms may include the following: respiratory tract irritation and coughing
- **Skin contact:** Adverse symptoms may include the following: pain or irritation, redness and blistering may occur, skin burns, ulceration and necrosis may occur
- **Ingestion:** Adverse symptoms may include the following: stomach pains

### Indication of immediate medical attention and special treatment needed, if necessary

- **Notes to physician:** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **Specific treatments:** Not applicable.
- **Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

### Section 5. Fire-fighting measures

#### Extinguishing media

- **Suitable extinguishing media:** Use an extinguishing agent suitable for the surrounding fire.
- **Unsuitable extinguishing media:** Do not use water jet or water-based fire extinguishers.
- **Specific hazards arising from the chemical:** No specific fire or explosion hazard.
- **Hazardous thermal decomposition Products:** Decomposition products may include the following materials: carbon dioxide, carbon monoxide, sulfur oxides and metal oxide/oxides
- **Special protective actions for firefighters:** Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- **Special protective equipment for firefighters:** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

- **For non-emergency personnel:** No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is
inadequate. Put on appropriate personal protective equipment.

For personal protective clothing requirements, please see Section 8.

Inform the relevant authorities if the product has entered the environment, including waterways, soil or air. Materials can enter waterways through drainage systems.

Methods and materials for containment and cleaning up

Small spill: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of waste material by using a licensed waste disposal contractor.

Large spill: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, watercourses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place dust in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Large spills to waterways may be hazardous due to alkalinity of the product. Dispose of waste material using a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure by obtaining and following special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material and keep the container tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: A key to using the product safely requires the user to recognize that portland slag cement reacts chemically with water to produce calcium hydroxide which can cause severe chemical burns. Every attempt should be made to avoid skin and eye contact with portland slag cement. Do not get portland slag cement inside boots, shoes or gloves. Do not allow wet, saturated clothing to remain against the skin. Promptly remove clothing and shoes that are dusty or wet with portland slag cement mixtures. Launder/clean clothing and shoes before reuse. Do not enter a confined space that stores or contains portland slag cement unless appropriate procedures and protection are available. Portland slag cement can build up or adhere to the walls of a confined space and then release or fall suddenly (engulfment).
## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| Portland slag cement, dust               | ACGIH TLV (United States, 3/2012)  
TWA: 1 mg/m³ 8 hours. Form: Respirable fraction  
NIOSH REL (United States, 6/2009)  
TWA: 5 mg/m³ 10 hours. Form: Respirable fraction  
OSHA PEL (United States, 6/2010)  
TWA: 5 mg/m³ 8 hours. Form: Total dust |
| Amorphous silica (total dust)            | ACGIH TLV (United States, 3/2012)  
TWA: 1 mg/m³ 8 hours Form: Respirable fraction  
OSHA PEL (United States, 6/2010)  
TWA: 6 mg/m³ 8 hours. |
| Calcium oxide                            | ACGIH TLV (United States, 3/2012)  
TWA: 2 mg/m³ 8 hours  
NIOSH REL (United States, 6/2009)  
TWA: 2 mg/m³ 10 hours.  
OSHA PEL (United States, 6/2010)  
TWA: 5 mg/m³ 8 hours. |
| Limestone                                | NIOSH REL (United States, 6/2009)  
TWA: 5 mg/m³ 10 hours. Form: Respirable fraction  
OSHA PEL (United States, 6/2010)  
TWA: 10 mg/m³ 10 hours. Form: Total  
TWA: 15 mg/m³ 8 hours. Form: Total dust |
| Magnesium oxide                          | ACGIH TLV (United States, 3/2012)  
TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction  
OSHA PEL (United States, 6/2010)  
TWA: 15 mg/m³ 8 hours. Form: Total particulates |
| Crystalline Silica (Quartz) (CAS 14808-60-7) | OSHA PEL (United States, 9/2017)  
TWA: 0.3 mg/m³. Form: Total dust (1,2)  
TWA: 0.06 mg/m³. Form: Respirable (1,2,3)  
ACGIH TLV (United States, 3/2012)  
TWA: 0.025 mg/m³. Form: Respirable fraction  
NIOSH REL (United States, 6/2009)  
TWA: 0.05 mg/m³. Form: Respirable dust |
| Calcium sulfate (gypsum)                 | ACGIH TLV (United States, 3/2012)  
TWA: 10 mg/m³ 8 hours. Form: Respirable fraction  
NIOSH REL (United States, 6/2009)  
TWA: 5 mg/m³ 8 hours. Form: Respirable fraction  
OSHA PEL Z-1 (United States, 2/2006)  
TWA: 5 mg/m³ 8 hours. Form: Respirable fraction  
TWA: 15 mg/m³ 8 hours. Form: Total dust |

### Appropriate engineering controls:

Use only with adequate ventilation. If user operations generate dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
Individual protection measures

Hygiene measures: Clean water should always be readily available for skin and (emergency) eye washing. Periodically wash areas contacted by portland slag cement with a pH neutral soap and clean, uncontaminated water. If clothing becomes saturated with portland slag cement, garments should be removed and replaced with clean, dry clothing.

Eye/face protection: To prevent eye contact, wear safety glasses with side shields, safety goggles or face shields when handling dust or wet portland slag cement. Wearing contact lenses when working with portland slag cement is not recommended.

Skin protection

Hand protection: Use impervious, waterproof, abrasion and alkali-resistant gloves. Do not rely on barrier creams in place of impervious gloves. Do not get cement inside gloves.

Body protection: Use impervious, waterproof, abrasion and alkali-resistant boots and protective long-sleeved and long-legged clothing to protect the skin from contact with wet cement. To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent cement from getting inside them. Do not get cement inside boots, shoes, or gloves. Remove clothing and protective equipment that becomes saturated with cement and immediately wash exposed areas of the body.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

Respiratory protection: Use properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and assigned protection factor of the selected respirator.

Section 9. Physical and chemical properties

Appearance

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Solid. [Powder.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Gray or white.</td>
</tr>
<tr>
<td>Odor:</td>
<td>Odorless.</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH:</td>
<td>&gt;11.5 [Conc. (% w/w): 1%]</td>
</tr>
<tr>
<td>Melting point:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point:</td>
<td>&gt;1000°C (&gt;1832°F)</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Not flammable. Not combustible.</td>
</tr>
<tr>
<td>Burning time:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Burning rate:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Lower and Upper explosive flammable limits:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Relative density:</td>
<td>2.3 to 3.1</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Slightly soluble in water.</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>0.1 to 1%</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Auto-ignition temperature:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>Not available.</td>
</tr>
<tr>
<td>SADT:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

Reactivity: Reacts slowly with water forming hydrated compounds, releasing heat and producing a strong alkaline solution until reaction is substantially complete.

Chemical Stability: The product is stable.

Possibility of hazardous reactions: Under normal circumstances of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials, acids, aluminum and ammonium salt. Portland slag cement is highly alkaline and will react with acids to produce a violent, heat-generating reaction. Toxic gases or vapors may be given off depending on the acid involved. Reacts with acids, aluminum metals and ammonium salts. Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, liberating hydrogen gas. Limestone ignites on contact with fluorne and is incompatible with acids, alum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silicates dissolve readily in hydrofluoric acid producing a corrosive gas-silicon...
Hazardous decomposition products: tetrafluoride.

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### Section 11. Toxicological information

**Information on toxicological effects**

**Acute toxicity:**
- Portland slag cement LD50/LC50 = Not available

**Irritation/Corrosion:**
- **Skin:** May cause skin irritation. May cause serious burns in the presence of moisture.
- **Eyes:** Causes serious eye damage. May cause burns in the presence of moisture.
- **Respiratory:** May cause respiratory tract irritation.

**Sensitization:**
- May cause sensitization due to the potential presence of trace amounts of hexavalent chromium.

**Mutagenicity:**
- There are no data available.

**Carcinogenicity:**

Classification below:

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>ACGIH</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement, portland, chemicals</td>
<td>-</td>
<td>-</td>
<td>A4</td>
<td>-</td>
</tr>
<tr>
<td>Crystalline Silica (Quartz) (CAS 14808-60-7)</td>
<td>-</td>
<td>1</td>
<td>A2</td>
<td>Known to be a human carcinogen.</td>
</tr>
</tbody>
</table>

**Reproductive toxicity:**
- There are no data available.

**Teratogenicity:**
- There are no data available.

**Specific target organ toxicity (single exposure)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of Exposure</th>
<th>Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium oxide</td>
<td>Category 3</td>
<td>Inhalation and skin contact</td>
<td>Respiratory tract irritation, skin irritation</td>
</tr>
<tr>
<td>Cement, portland, chemicals</td>
<td>Category 3</td>
<td>Inhalation and skin contact</td>
<td>Respiratory tract irritation, skin irritation</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity (repeated exposure)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of Exposure</th>
<th>Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (Quartz) (CAS 14808-60-7)</td>
<td>Category 1</td>
<td>Inhalation</td>
<td>Respiratory tract and kidneys</td>
</tr>
</tbody>
</table>

**Aspiration hazard:**
- There are no data available.

### Information on the likely routes of exposure

- Dermal contact. Eye contact. Inhalation. Ingestion.

**Potential acute health effects:**
- **Eye contact:** Causes serious eye damage.
- **Inhalation:** May cause respiratory irritation.
- **Skin contact:** Causes severe burns. May cause an allergic skin reaction.
- **Ingestion:** May cause burns to mouth, throat and stomach.

**Symptoms related to the physical, chemical and toxicological characteristics:**
- **Eye contact:** Adverse symptoms may include the following: pain, watering, redness.
- **Inhalation:** Adverse symptoms may include the following: respiratory tract irritation, coughing.
- **Skin contact:** Adverse symptoms may include the following: pain or irritation, redness, blistering may occur, skin burns, ulcerations and necrosis may occur.
- **Ingestion:** Adverse symptoms may include the following: stomach pains.

**Delayed and immediate effects:**
- **Short term exposure**
and also chronic effects from short and long term exposure:

Potential immediate effects: No known significant effects or critical hazards.
Potential delayed effects: No known significant effects or critical hazards.

Long term exposure
Potential immediate effects: No known significant effects or critical hazards.
Potential delayed effects: No known significant effects or critical hazards.

Potential chronic health effects:
General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. If sensitized to hexavalent chromium, a severe allergic dermal reaction may occur when subsequently exposed to very low levels.

Carcinogenicity: Portland slag cement is not classifiable as a human carcinogen. Crystalline silica is considered a hazard by inhalation. IARC has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease.

Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity:
Acute toxicity estimates: There are no data available.

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**Section 12. Ecological Information**

**Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium oxide</td>
<td>Chronic NOEC 100 mg/L</td>
<td>Fish-Oreochromis niloticus-Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>46 days</td>
</tr>
<tr>
<td>Fresh water</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability: There are no data available.
Bioaccumulative potential: There are no data available.
Mobility in soil: Soil/water partition coefficient (Koc): Not available.
Other adverse effects: No known significant effects or critical hazards.

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**Section 13. Disposal considerations**

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Untreated waste should not be released to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe manner. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff, and contact with soil, waterways, drains and sewers.

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**Section 14. Transportation information**

<table>
<thead>
<tr>
<th>UN number</th>
<th>DOT Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Additional information</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Special precautions for user: Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory Information

TSCA 6 final risk management: Chromium, ion (Cr6+)
United States inventory (TSCA 8b): Cements are considered to be statutory mixtures under TSCA. CAS 65997-15-1 is included on the TSCA inventory.
CERCLA: This product is not listed as a CERCLA substance
Clean Air Act Section 112 (b): Hazardous Air Pollutants (HAPs) – Not listed
Clean Air Act Section 602: Class I Substances - Not listed
Clean Air Act Section 602: Class II Substances - Not listed
DEA List I Chemicals: (Precursor Chemicals) – Not listed
DEA List II Chemicals: (Essential Chemicals) – Not listed

SARA 311/312
Classification: Immediate (acute) health hazard Delayed (chronic) health hazard

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire Hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium oxide</td>
<td>A-B</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Quartz</td>
<td>&gt;0.1</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Chromium, ion (Cr6+)</td>
<td>&lt;0.1</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

SARA 313

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form R-Report requirements</td>
<td>Chromium, ion (Cr6+)</td>
<td>8540-29-9</td>
</tr>
</tbody>
</table>

State regulations

Massachusetts: Listed
New York: None of the components are listed.
New Jersey: Listed
Pennsylvania: Listed

California Prop. 65

WARNING: This product contains crystalline silica and chemicals (trace metals) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the above warning in the absence of definitive testing to prove the defined risks do not exist.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>8.2 micrograms/day (ingestion)</td>
</tr>
<tr>
<td>Chromium, ion (Cr6+)</td>
<td>Yes</td>
<td>Yes</td>
<td>0.001µg/day (inhalation)</td>
<td>No</td>
</tr>
</tbody>
</table>
International regulations

International lists:  
Canadian Domestic Substances List (DSL): Portland cement is included on the DSL. 
ECC – EINECS: Listed

Section 16. Other Information

Date of issue: 07/01/2018  
Replaces: 06/01/2015  
Revised Section(s): Section 8

Notice to reader

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of this portland slag cement as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with this portland slag cement to produce portland slag cement products. Users should review other relevant material safety data sheets before working with this portland slag cement or working on related portland slag cement products.

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Abbreviations

AGGIH — American Conference of Governmental Industrial Hygienists  
CAS — Chemical Abstract Service  
CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act  
CFR — Code of Federal Regulations  
DOT — Department of Transportation  
GHS — Globally Harmonized System  
HEPA — High Efficiency Particulate Air  
IATA — International Air Transport Association  
IARC — International Agency for Research on Cancer  
IMDG — International Maritime Dangerous Goods  
NIOSH — National Institute of Occupational Safety and Health  
NOEC — No Observed Effect Concentration  
NTP — National Toxicology Program  
OSHA — Occupational Safety and Health Administration  
PEL — Permissible Exposure Limit  
REL — Recommended Exposure Limit  
RQ — Reportable Quantity  
SARA — Superfund Amendments and Reauthorization Act  
SDS — Safety Data Sheet  
TLV — Threshold Limit Value  
TPQ — Threshold Planning Quantity  
TSCA — Toxic Substances Control Act  
TWA — Time-Weighted Average  
UN — United Nations