SAFETY DATA SHEET

SAUEREISEN

Date Prepared: 06/04/2015
SDS No: SCC-F120S

F120 Shotcrete

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: F120 Shotcrete
PRODUCT DESCRIPTION: Shotcrete
PRODUCT CODE: F120S
PRODUCT FORMULATION NAME: F120 Shotcrete
CHEMICAL FAMILY: Portland Cement

MANUFACTURER:
Sauereisen
160 Gamma Drive
Pittsburgh, PA 15238
Emergency Contact: John Kozak
Emergency Phone: (800)424-9300
Alternate Contact: Don Schubert
Customer Service: 412 963-0303
E-Mail: jakozak@sauereisen.com

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:
- Carcinogenicity, Category 1B
- Target Organ Toxicity (Repeated exposure), Category 2
- Eye Irritation, Category 2B
- Skin Irritation, Category 2

GHS LABEL

Exclamation mark
Health hazard

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H320: Causes eye irritation.
H315: Causes skin irritation.
H350: May cause cancer.
H373: May cause damage to lungs or kidneys through prolonged or repeated exposure via inhalation.

PRECAUTIONARY STATEMENTS

Prevention:
- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P264: Wash ... thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
P271: Use only outdoors or in a well-ventilated area.

Response:
P314: Get medical advice/attention if you feel unwell.
P308+P313: IF exposed or concerned: 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.
P337+P313: If eye irritation persists: Get medical advice/attention.
P302+P352: IF ON SKIN: Wash with plenty of water/...
P321: Specific treatment (see ... on this label).
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P362: Take off contaminated clothing.

Storage:
P405: Store locked up.

Disposal:
P501: Dispose of contents/container in accordance with local/national regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Wt.%</th>
<th>CAS</th>
</tr>
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<tbody>
<tr>
<td>Silica, Crystalline</td>
<td>&lt; 60</td>
<td>14808-60-7</td>
</tr>
<tr>
<td>Portland Cement</td>
<td>&lt; 60</td>
<td>65997-15-1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

EYES: Check for and remove all contact lenses. Flush eyes immediately with water or physiological saline for at least 15 minutes while lifting upper and lower lids. Do not use eye ointment. Seek medical attention.

SKIN: Wash with soap and water. Get medical advice/attention if irritation develops or persists.

INGESTION: Do not induce vomiting - in general, no treatment is necessary unless large quantities of product are ingested, however, seek medical attention.

INHALATION: If difficulty breathing, move to fresh air once. Apply artificial respiration if breathing has stopped. Seek medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Causes pain, redness and tearing.

SKIN: Contact causes skin irritation.

INHALATION: Causes sneezing and burning or itching in nose and throat.

ACUTE EFFECTS: Over exposure can cause severe skin, eye, respiratory and gastrointestinal irritation

CHRONIC EFFECTS: The adverse health effects-- silicosis, lung cancer, autoimmune and chronic kidney diseases, tuberculosis and non-malignant respiratory diseases-- are chronic effects.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Material is non-flammable.

EXTINGUISHING MEDIA: NA = Not Applicable

HAZARDOUS COMBUSTION PRODUCTS: NA = Not Applicable

EXPLOSION HAZARDS: Dusts and aerosols at sufficient concentrations may exhibit explosive characteristics if ignited by static discharge or spark. Exercise care during dusting or misting operations such as grinding or drilling.

FIRE FIGHTING PROCEDURES: Normal precautions are satisfactory.

HAZARDOUS DECOMPOSITION PRODUCTS: NA = Not Applicable

6. ACCIDENTAL RELEASE MEASURES
SMALL SPILL: Sweep, scoop or vacuum discharged material. Respiratory protection should be worn at all times and skin contact should be avoided. Do not allow material to enter sewers or waterways. Observe environmental regulations.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Avoid contact with eyes, skin, and clothing.
- Avoid breathing dust.
- For industrial use only!
- Do not take internally.
- May cause irritation.
- Wear chemical splash goggles, gloves, and protective clothing.
- Use adequate ventilation and employ respiratory protection where dust or fumes may be generated.
- Wash thoroughly after handling.

HANDLING: Do not breathe dust. Keep airborne dust concentrations below permissible exposure limit (PEL). Do not rely on sight to determine if dust is in the air. Respirable crystalline silica dust may be in the air without a visible dust cloud. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain, clean and fit tested respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing that has become dusty.

STORAGE: Store in a cool, dry place.
- Keep container closed when not in use.
- Keep away from food and drinking water.
- Always mix well before using.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Type</th>
<th>ppm</th>
<th>mg/m³</th>
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<tr>
<td>Silica, Crystalline</td>
<td>OSHA PEL</td>
<td>TWA</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL</td>
<td>STEL</td>
<td>0.05</td>
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<tr>
<td></td>
<td>ACGIH TLV</td>
<td>TWA</td>
<td>0.025</td>
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<tr>
<td></td>
<td>Supplier OEL</td>
<td>TWA</td>
<td>NL</td>
</tr>
<tr>
<td></td>
<td>Supplier OEL</td>
<td>STEL</td>
<td>NL</td>
</tr>
</tbody>
</table>

ENGINEERING CONTROLS: Provide adequate general or local ventilation to keep vapors below PELs. Control vapor concentration & keep below PEL and accepted TLVs if established. Provide workers with dust respirators for use in emergency or non-routine situations where dust levels may exceed PEL. A NIOSH approved half-face-piece respirator can be used up to 10xPEL. For up to 100x PEL, use a full-face respirator with replaceable dust filter. Higher exposures require an approved air supplied respirator.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Rubber framed or cup type goggles.

RESPIRATORY: Any dust respirator for 5 times PEL or less. Any fume respirator or high-efficiency particulate respirator for 10 times PEL or less. If TLV of any component is exceeded use appropriate respiratory protection or ventilate in accordance with OSHA Regulation 29 CFR Part 1910.

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Safety shower and eyewash station should be within direct access. Keep containers closed.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Mild

APPEARANCE: Granular powder

COLOR: Tan or Gray

pH: 7 to 10
PERCENT VOLATILE: NA = Not Applicable
FLASH POINT AND METHOD: None
FLAMMABLE LIMITS: NA to NA
AUTOIGNITION TEMPERATURE: None
VAPOR PRESSURE: NA = Not Applicable
BOILING POINT: (4046°F)
MELTING POINT: (3050°F)
SOLUBILITY IN WATER: Insoluble
EVAPORATION RATE: NA = Not Applicable
SPECIFIC GRAVITY: 3.85

10. STABILITY AND REACTIVITY

REACTIVITY: Yes
HAZARDOUS POLYMERIZATION: None
STABILITY: Stable under normal conditions of use and storage.
CONDITIONS TO AVOID: None
POSSIBILITY OF HAZARDOUS REACTIONS: None
HAZARDOUS DECOMPOSITION PRODUCTS: Silica will dissolve in hydrofluoric acid and produce a corrosive gas - Silicon tetrafluoride.
INCOMPATIBLE MATERIALS: Avoid contact with strong bases, hydrofluoric acids, fluorine, and fluorine compounds.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

NOTES:

Acute Silicosis can occur with exposure to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.

SERIOUS EYE DAMAGE/IRRITATION: Eye, Skin and Inhalation Irritant.

CARCINOGENICITY

IARC: Silica is listed as having sufficient evidence to be a carcinogen in humans and in experimental animals, for the carcinogenicity of quartz and cristobalite. The overall IARC evaluation was that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (group 1).

NTP: The National Toxicology Program, in it's Ninth Annual report on Carcinogens, classified "silica, crystaline (respirable)" as a known human carcinogen.

OSHA: Crystalline Silica (Quartz) is not regulated by the US Occupational Safety and Health Administration as a carcinogen.

NOTES:

Silica is listed by IARC and NTP as having sufficient evidence to be a carcinogen in humans and in experimental animals for the carcinogenicity of quartz and cristobalite. The overall IARC evaluation was that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (group 1).

STOT-SINGLE EXPOSURE:

Nephrotoxicity - Recent studies suggest that exposure to respirable crystalline silica or that the disease silicosis is associated with the increased incidence of kidney disorders.

GENERAL COMMENTS:

ADDITIONAL INFORMATION: Crystalline Silica (Quartz)
Silicosis - The major concern is silicosis caused by the inhalation of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute.

Scleroderma - There is evidence that exposure to respirable crystalline silica or silicosis is associated with incidence of scleroderma of the lungs.

Tuberculosis - Individuals with silicosis are at risk to develop tuberculosis, if exposed to persons with tuberculosis.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Crystalline silica (quartz) is not known to be an environmental hazard.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: The packaging and material may be disposed of in landfills; however, material should be covered or wetted to minimize generation of airborne dust.

PRODUCT DISPOSAL: Sweep up excess; flush area with large quantities of water. Material may be disposed of in an approved landfill according to official regulations.

EMPTY CONTAINER: Disposal must be made according to official regulations.

RCRA/EPA WASTE INFORMATION: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR 261 et seq.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

15. REGULATORY INFORMATION

UNITED STATES

DOT LABEL SYMBOL AND HAZARD CLASSIFICATION

R36/37/38: Irritating to eyes, respiratory system and skin.
R40: Limited evidence of a carcinogenic effect.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R48/23: Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R49: May cause cancer by inhalation.
S20/21: When using do not eat, drink or smoke.
S22: Do not breathe dust.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S38: In case of insufficient ventilation, wear suitable respiratory equipment.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Chronic. Irritant.

FIRE: No PRESSURE GENERATING: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

313 REPORTABLE INGREDIENTS: There are no listed chemicals above detection limits in this compound.

TITLE III NOTES: None above detection limits.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Crystalline silica (Quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Acts (CERCLA), 40 CFR 302.

TSCA (TOXIC SUBSTANCE CONTROL ACT)
**Chemical Name** | **CAS**
---|---
Silica, Crystalline | 14808-60-7
Portland Cement | 65997-15-1

**TSCA STATUS:** Components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

**REGULATIONS**

**STATE REGULATIONS:**

- **Massachusetts Toxic Use Reduction Act-** Silica, Crystalline (respirable size, <10microns) is toxic for purposes of the Massachusetts Toxic Use Reduction Act

- **Pennsylvania Worker and Community Right to Know Act-** Quartz is a hazardous substance under the act, but it is not a special hazardous substance or an environmental hazardous substance.

- **California Inhalation Reference Exposure Level (REL)-** California established a chronic REL of 3 ug for silica crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

**CALIFORNIA PROPOSITION 65:** Known to the State of California to cause cancer and reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Act of 1986".

It has not been determined and cannot be ascertained that this product would not expose users to the listed chemicals at the very low level prescribed in the regulations. Therefore, it is the user's responsibility to determine if the percent of the hazardous / carcinogenic ingredients listed elsewhere in the SDS comply with State of California regulations.

**RCRA STATUS:** Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40CFR 261 et seq.

**CANADA**

**WHMIS HAZARD SYMBOL AND CLASSIFICATION**

![Toxic]

- **R36/37/38:** Irritating to eyes, respiratory system and skin.
- **R40:** Limited evidence of a carcinogenic effect.
- **R48/20:** Harmful : danger of serious damage to health by prolonged exposure through inhalation.
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- **R49:** May cause cancer by inhalation.
- **S20/21:** When using do not eat, drink or smoke.
- **S22:** Do not breathe dust.
- **S26:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- **S36/37/39:** Wear suitable protective clothing, gloves and eye/face protection.
- **S38:** In case of insufficient ventilation, wear suitable respiratory equipment.

**WHMIS CLASS:** Class D, Division 2, Subdivision A: Materials cause other toxic effects, very toxic material.

**DOMESTIC SUBSTANCE LIST (INVENTORY):** Components included on inventory

16. **OTHER INFORMATION**

**PREPARED BY:** John A Kozak  
**Date Prepared:** 06/04/2015
<table>
<thead>
<tr>
<th>HMIS RATING</th>
<th></th>
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</thead>
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<tr>
<td>HEALTH</td>
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</tr>
<tr>
<td>FLAMMABILITY</td>
<td>0</td>
</tr>
<tr>
<td>PHYSICAL HAZARD</td>
<td>0</td>
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<tr>
<td>PERSONAL PROTECTION</td>
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