1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 600 Basolit Sulfur Cement
PRODUCT DESCRIPTION: Basolit Sulfur Cement
PRODUCT CODE: 600G
PRODUCT FORMULATION NAME: 600 Basolit Sulfur Cement
CHEMICAL FAMILY: Sulfur Cement

MANUFACTURER
Sauereisen
160 Gamma Drive
Pittsburgh, PA 15238
Emergency Contact: Greg Maloney
Emergency Phone: 412-963-0303
Alternate Emergency Phone: 412-963-0303
Customer Service: x240
E-Mail: gdmaloney@sauereisen.com

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:
- Eye Irritation, Category 2B
- Skin Irritation, Category 2
- Carcinogenicity, Category 2

GHS LABEL

Exclamation mark
Health hazard

SIGNAL WORD: WARNING

HAZARD STATEMENTS

H320: Causes eye irritation.
H315: Causes skin irritation.
H335: May cause respiratory irritation.
H351: Suspected of causing cancer.

PRECAUTIONARY STATEMENTS

Prevention:
- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P264: Wash ... thoroughly after handling.

Response:
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Wt.%</th>
<th>CAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur</td>
<td>&lt; 60</td>
<td>7704-34-9</td>
</tr>
<tr>
<td>Silica, Crystalline</td>
<td>&lt; 50</td>
<td>14808-60-7</td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>&lt; 0.5</td>
<td>7446-09-5</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>&lt; 0.5</td>
<td>7783-06-4</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: For Molten product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean dry bandage and get prompt medical attention. No attempt should be made to remove material from skin or to remove contaminated clothing as the flesh can be easily torn. Do not apply petroleum jelly, mineral oils or ointments.

For Solid product, remove dust by washing with soap and water. Remove contaminated clothing and launder separately.

INHALATION: If difficulty breathing, move to fresh air once. For acute overexposure, give oxygen if breathing is difficult. Apply artificial respiration if breathing has stopped. Keep patient warm and at rest. Seek immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Fumes from hot material may cause irritation. Hot material causes thermal burns.

SKIN: Prolonged or repeated skin contact may cause irritation. Contact with hot material causes thermal burns.

INHALATION:
Upon burning toxic sulfur dioxide gas is produced. Sulfur dioxide gas is irritating to the eyes and respiratory tract causing burning of the eyes, tearing of the eyes, coughing and chest tightness.

Sulfur can react with oxidizing materials and hydrocarbons to produce hydrogen sulfide gas. At low concentrations hydrogen sulfide is irritating to all moist tissues. At higher concentrations hydrogen sulfide is noted as a systemic poison which causes respiratory paralysis. Less than 1/2 hour exposure at 300-500 ppm can result in headache, dizziness, nausea, and pain in the respiratory tract. Paralysis of the breathing centers can occur after a few breaths at 1000-2000 ppm followed by collapse and quick death if removal to fresh air and restoration of breathing is not rapidly accomplished.

5. FIRE FIGHTING MEASURES

EXISTINGUISHING MEDIA:
Carbon dioxide, foam, dry chemicals, sand, earth, and steam.
HAZARDOUS COMBUSTION PRODUCTS: Combustion may produce hydrogen sulfide, sulfur oxides, carbon monoxide and carbon dioxide.

EXPLOSION HAZARDS: Not sensitive to mechanical impact or static discharge

FIRE FIGHTING PROCEDURES: Evolves Sulfur Dioxide and Hydrogen Sulfide. Use self contained breathing apparatus. Blanket flames with one of the above listed extinguishing media. DO NOT USE WATER.

FIRE FIGHTING EQUIPMENT: Toxic fumes will be evolved when this material is involved in a fire. Self-contained breathing apparatus should be available for fire fighters.

FIRE EXPLOSION: Hydrogen Sulfide combustion product may be explosive. Data as follows

- Minimum Explosive concentration: <6%
- Maximum Explosive Pressure: 41 psi (2.8 atm)
- Average Pressure Rise: 840 psi/sec (48 atm/sec)
- Maximum Pressure Rise: 2750 psi/sec (133 atm/sec)
- Lower Explosive Limit: 3.1 to 4.3% by volume

SENSITIVE TO STATIC DISCHARGE: None

SENSITIVITY TO IMPACT: None

HAZARDOUS DECOMPOSITION PRODUCTS: Sulfur oxide combustion products may combine with water to form acids. Fighting fire with water may evolve Hydrogen Sulfide above its LEL (3.5%)
EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ppm OSHA PEL</th>
<th>mg/m³ OSHA PEL</th>
<th>ppm ACGIH TLV</th>
<th>mg/m³ ACGIH TLV</th>
<th>ppm Supplier OEL</th>
<th>mg/m³ Supplier OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, Crystalline</td>
<td>TWA 10</td>
<td>0.025</td>
<td></td>
<td></td>
<td>NL</td>
<td>NL</td>
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<tr>
<td></td>
<td>STEL 0.1</td>
<td></td>
<td></td>
<td></td>
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<td>NL</td>
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<tr>
<td>Sulfur Dioxide</td>
<td>TWA 5</td>
<td>13</td>
<td>(2) NI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td></td>
<td>(5) NI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>TWA 10</td>
<td>NIC</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>STEL</td>
<td>15</td>
<td>NIC</td>
<td></td>
<td></td>
<td></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. Spark-proof fans are required.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses with side shields, chemical resistant goggles, or face shield. Contact lenses should not be worn.

SKIN: Heat resistant gloves and long sleeved shirts. Thoroughly launder clothing before re-use.

RESPIRATORY: Use organic vapor cartridges in respirators. If TLV of any component is exceeded use appropriate respiratory protection or ventilate in accordance with OSHA Regulation 29 CFR Part 1910.V.

PROTECTIVE CLOTHING: NOTE: DO NOT place clothing with adherent sulfur cement in the clothes dryer as the sulfur may ignite. Be sure to empty sulfur particles from pockets and cuffs as well as remove all adherent pieces from clothing before laundering.

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

OTHER USE PRECAUTIONS: ***This product contains encapsulated silica. By OSHA letter of interpretation, the silica is not considered respirable in either the cement paste form or cured cement form. However, if the cured cement is polished, ground or chipped during processing, handling or use, the silica maybe released as an airborne respirable particle. In these instances appropriate personal protection equipment and local ventilation controls must be employed.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Sulfur.

ODOR THRESHOLD: Hydrogen Sulfide: 1 ppm

APPEARANCE: solid flakes or ingots

COLOR: Dark gray to black

FLASH POINT AND METHOD: (370°F)

FLAMMABLE LIMITS: 0 to 0

AUTOIGNITION TEMPERATURE: (478°F) to (511°F)

VAPOR PRESSURE: 27.75

VAPOR DENSITY: 27.75

BOILING POINT: > (800°F)

MELTING POINT: (225°F) to (248°F)

SOLUBILITY IN WATER: Insoluble

SPECIFIC GRAVITY: 2.1

(VOC): 111.000
10. STABILITY AND REACTIVITY

REACTIVITY: Yes

HAZARDOUS POLYMERIZATION: No

STABILITY: Stable under normal conditions of use and storage.

CONDITIONS TO AVOID: Avoid excessive heat and flame. May react with strong oxidants such as chlorates, bromides, and nitrates.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition or burning may produce toxic compounds such as carbon monoxide, carbon dioxide, sulfur oxides, and hydrogen sulfide. Sulfur oxides may combine with moisture to form acids.

INCOMPATIBLE MATERIALS: Avoid contact with water. Sulfur is moderately reactive. Mixture with chlorates, nitrates or other red label oxidizers may be explosive.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD_{50}: > 2020 mg/kg (rat)

ORAL LD_{50}: > 5050 mg/kg (rat)

INHALATION LC_{50}: > 9200 ppm / 4 hours (rat)

EYE EFFECTS: Irritant.

SKIN EFFECTS: 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, crystalline (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).

IRRITATION: Eye, Skin and Inhalation Irritant.

TERATOGENIC EFFECTS: No Data Available

MUTAGENICITY: No Data Available

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Crystalline silica (quartz) is not known to be ecotoxic. There is no data that suggests that crystalline silica (quartz) is toxic to birds, fish, invertebrates, microorganisms or plants.

AQUATIC TOXICITY (ACUTE)

96-HOUR LC_{50}: TLM 96 > 1000 ppm

Notes: Fungicide

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Material should be disposed of as hazardous waste in accordance with Federal, state and local environmental regulations.

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

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)
PROPER SHIPPING NAME: Not Regulated
TECHNICAL NAME: High Temperature Bonding Mortar
PRIMARY HAZARD CLASS/DIVISION: Not Regulated
UN/NA NUMBER: NA
PACKING GROUP: NA

15. REGULATORY INFORMATION

UNITED STATES

DOT LABEL SYMBOL AND HAZARD CLASSIFICATION

R20/21: Harmful by inhalation and in contact with skin.
R36/37/38: Irritating to eyes, respiratory system and skin.
R44: Risk of explosion if heated under confinement.
S13: Keep away from food, drink and animal feedingstuffs.
S16: Keep away from sources of ignition — No smoking.
S20/21: When using do not eat, drink or smoke.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S3/9/49: Keep only in the original container in a cool, well-ventilated place.
S36/37: Wear suitable protective clothing and gloves.
S59: Refer to manufacturer/supplier for information on recovery/recycling.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

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 ComprehensiveEnvironnmental Response Compensatia on and liability Acts (CERCLA), 40 CFR 302

<table>
<thead>
<tr>
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<th>CERCLA RQ</th>
</tr>
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<tbody>
<tr>
<td>Hydrogen Sulfide</td>
<td>&lt; 0.5</td>
<td>100</td>
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TSCA (TOXIC SUBSTANCE CONTROL ACT)

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

CLEAN AIR ACT

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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.

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION

Toxic  Flammable

Solid

R20/21: Harmful by inhalation and in contact with skin.
R36/37/38: Irritating to eyes, respiratory system and skin.
R44: Risk of explosion if heated under confinement.
S13: Keep away from food, drink and animal feedingstuffs.
S16: Keep away from sources of ignition — No smoking.
S20/21: When using do not eat, drink or smoke.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S3/9/49: Keep only in the original container in a cool, well-ventilated place.
S36/37: Wear suitable protective clothing and gloves.
S59: Refer to manufacturer/supplier for information on recovery/recycling.

WHMIS CLASS: When supplied in Ingot or flaked form in packages of 400 kilograms or less, it is NOT a WHMIS controlled product

DOMESTIC SUBSTANCE LIST (INVENTORY): Components included on inventory

16. OTHER INFORMATION

PREPARED BY: John A Kozak  Date Prepared: 05/15/2015

HMIS RATING

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2</td>
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<tr>
<td>Flammability</td>
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<tr>
<td>Physical Hazard</td>
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<tr>
<td>Personal Protection</td>
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