SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION.

Sauereisen, Inc.
160 Gamma Drive
Pittsburgh, PA 15238-2989
412/963-0303
CHEMICAL EMERGENCY HOTLINE Chemtrec: 800-424-9300/703-527-3887

PRODUCT NAME: **CA-0100 CAPPING COMPOUND, TESTMARK**
ITEM NUMBER: CA-0100
ITEM DESCRIPTION: CAPPING COMPOUND, TESTMARK
PRODUCT DESCRIPTION: CAPPING COMPOUND, TESTMARK, FLAKED SULFUR
CHEMICAL FAMILY: SULFUR
REVISION DATE: 06/25/09

·PRODUCT USE: Corrosion resistant mortar/setting bed

SECTION 2. COMPOSITION AND DATA ON COMPONENTS WITH LIMITS

COMPONENT/CAS #	ACGIH TLV	OSHA PEL	% WT	NOTES
SULFUR 7704-34-9	10 MG/M³ (TWA)	20 MG/M³ (STEL)	<60%	
SILICA, CRYSTALLINE 14808-60-7	0.025 MG/M³ TWA	0.1 MG/M³ STEL	<50%	
SULFUR DIOXIDE 7449-09-5	2 PPM (TLV)	5 PPM (PEL)	<1%	SARA Rep.
HYDROGEN SULFIDE 7783-06-4 50 PPM 10 MINUTE PEAK	10 PPM (TLV)	20 PPM CEILING	<1%	SARA Rep.

·Exposure values shown for guidance only. Please follow applicable regulations.

SECTION 3. HAZARDS IDENTIFICATION

·HMIS rating

Health	2
Flammability	1
Physical Hazard	0
Personal protection	H

·THRESHOLD LIMIT VALUE: 10 ppm (H2S). During normal use, when heated to 260-290°F, small amounts of H2S and SO2 may be evolved, usually less than 2 ppm each.
·EFFECTS OF OVEREXPOSURE: Fumes from hot material only.
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.

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

PRODUCT NAME: **CA-0100 CAPPING COMPOUND, TESTMARK**
ITEM NUMBER: CA-0100
ITEM DESCRIPTION: CAPPING COMPOUND, TESTMARK
REVISION DATE: 06/25/09

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.

SECTION 4. FIRST AID MEASURES

·EYE CONTACT: 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.
·INGESTION: Not expected to be a problem. However, if greater than 1/2 liter (pint) ingested, immediately give 1 to 2 glasses of water and call a physician, hospital emergency room, or poison control center for assistance.
·INHALATION: If difficulty breathing, move to fresh air at once. For acute overexposure, give oxygen if breathing difficult. Apply artificial respiration if breathing has stopped. Keep patient warm and at rest. Seek immediate medical attention.
·SKIN CONTACT: (MOLTEN) Flush the area with plenty of cold water to dissipate heat. Do not try to remove the material. Cover with a clean, dry bandage and get the patient to a physician. Attempts to remove the material may damage the flesh. Do not apply petroleum jelly, mineral oils, or ointments. They may complicate the removal of the material by the physician. (SOLID) Remove sulfur dust by washing with soap and water. Remove clothing that becomes contaminated with sulfur dust and wash separately from other laundry.

SECTION 5. FIRE FIGHTING MEASURES

·AUTO IGNITION TEMPERATURE: 478°F-511°F (248°-266°C)
·EXPLOSION DATA: Not sensitive to mechanical impact or static discharge.
·EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, sand, earth, and steam.
·NOTE: Many dusts and aerosols may exhibit explosive characteristics if ignited by static discharge or spark. Exercise care to avoid causing dusting or misting operations such as grinding or drilling.
·FIRE AND EXPLOSION HAZARDS: Fighting fire with water may evolve hydrogen sulfide above its LEL (3.5%) in contained vapor spaces.
·FIRE FIGHTING PROCEDURES: Evolves SO2 and H2S. Use self-contained breathing apparatus. Blanket flames with one of the above extinguishing media or cover vessel to smother fire. DO NOT USE WATER!
·FLAMMABILITY - Flammable in presence of open flame, excessive heat >310°F.
·FLAMMABLE LIMITS LEL: NE
·FLAMMABLE LIMITS UEL: NE
·FLASHPOINT: F(C)(Method) 370°F(188°C) Sulfur COC
·SULFUR - The vapor pressure of sulfur is low @ 250-315°F and pure sulfur will not generate an explosive atmosphere at the temperature range. However, hydrogen sulfide which may be evolved is explosive. Data pertains to hydrogen sulfide:

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

·CLEAN-UP PROCEDURE: Hot material: if the spill is large, then dike. Molten material should be allowed to cool and then collected for disposal. Before attempting clean-up, refer to hazard information listed on this sheet.

PRODUCT NAME: **CA-0100 CAPPING COMPOUND, TESTMARK**
ITEM NUMBER: CA-0100
ITEM DESCRIPTION: CAPPING COMPOUND, TESTMARK
REVISION DATE: 06/25/09

SECTION 7. HANDLING AND STORAGE

·Avoid contact with eyes, skin, and clothing.
·Avoid breathing dust.
·For industrial use only!
·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.
STORAGE: Store in a cool, dry place.
STORAGE: Keep container closed when not in use.
STORAGE: Store away from direct heat and flame.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

See Section 2 for the components that have limit values that require monitoring at the workplace.
·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.
·EYE PROTECTION: Safety glasses with side shields, chemical-type goggles, or face shield. Contact lenses should not be worn.
·RESPIRATORY PROTECTION: Organic vapor cartridge. If TLV of any component is exceeded, use appropriate respiratory protection or ventilate in accordance with OSHA Regulation 29 CFR Part 1910.V. A NIOSH/OSHA approved respirator should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on magnitutde of exposure. A self contained breathing apparatus should be available for situations where sulfur dioxide or hydrogen sulfide is generated.
·SKIN PROTECTION: Heat resistant gloves and long-sleeved shirts. Thoroughly launder clothing before re-use.

·NOTE: DO NOT place clothing with adherent sulfur cement in the clothes drier 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.

·VENTILATION: Provide adequate general or local ventilation to keep vapors below PEL's. Control vapor concentration & keep below PEL's and accepted TLV's if established. Spark-proof fans are required.
·OTHER PRECAUTIONS: Wash thoroughly after handling. Safety shower and eyewash station should be within direct access. Keep containers closed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

·% VOLATILE BY VOLUME: 35 G/M3
·APPEARANCE AND ODOR: Dark gray solid flakes, slight sulfur odor.
·BOILING POINT: >800°F (426°C)
·COEFFICIENT OF WATER/OIL DISTRIBUTION: NA
·EVAPORATION RATE: NA

PRODUCT NAME: **CA-0100 CAPPING COMPOUND, TESTMARK**
ITEM NUMBER: CA-0100
ITEM DESCRIPTION: CAPPING COMPOUND, TESTMARK
REVISION DATE: 06/25/09

·MELTING POINT: 265°F (129°C)
·ODOR THRESHOLD: Hydrogen Sulfide - 1 PPM
·PH: NE
·SPECIFIC GRAVITY: 2.1
·SOLUBILITY IN WATER: Insoluble
·VAPOR DENSITY: >1.0
·VAPOR PRESSURE: 1.0 mm Hg @ 184°F (84°C)

SECTION 10. STABILITY AND REACTIVITY

·CONDITIONS TO AVOID: Avoid excessive heat and flame. May react with strong oxidants such as chlorates, bromides, and nitrates.
·HAZARDOUS DECOMPOSITION PRODUCTS: Combustion may produce hydrogen sulfide, sulfur oxides, carbon monoxide, and carbon dioxide. Sulfur oxides may combine with moisture to form acids.
·HAZARDOUS POLYMERIZATION: Will not occur. Conditions to avoid: heat, flames, and sparks.
·INCOMPATIBILITY: Avoid contact with water. Sulfur is moderately reactive. Mixture with chlorates, nitrates, or other red label oxidizers may be explosive.
·STABILITY: Stable under ordinary conditions of use and storage.

SECTION 11. TOXICOLOGICAL INFORMATION

·ACGIH NO
·IARC YES
·EFFECTS OF ACCUTE EXPOSURE: Refer to Section 3.
·EFFECTS OF CHRONIC EXPOSURE: Refer to Section 3.
·MUTAGENIC EFFECTS: If not addressed in Section 3, the data is not available.
·REPRODUCTIVE TOXICITY: If not addressed in Section 3, the data is not available.
·TERATOGENIC EFFECTS: If not addressed in Section 3, the data is not available.
·NAME(S) OF TOXICOLOGICALLY SYNERGISTIC PRODUCTS AND EFFECTS: If not addressed in Section 3, data is not available.
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.
·Cancer - 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).
·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.
·Nephrotoxicity - Recent studies suggest that exposure to respirable crystalline silica or that the disease silicosis is associated with the increased incidence of kidney disorders.
·LC50/LD50: There is no data available.

PRODUCT NAME: **CA-0100 CAPPING COMPOUND, TESTMARK**
ITEM NUMBER: CA-0100
ITEM DESCRIPTION: CAPPING COMPOUND, TESTMARK
REVISION DATE: 06/25/09

·EYE IRRITANT: Yes
·INGESTION IRRITANT: No
·INHALATION IRRITANT: Yes
·RESPIRATORY SENSITIZER: No
·SKIN IRRITANT: Yes

SECTION 12. ECOLOGICAL INFORMATION

·Crystalline silica (quartz) is not known to be an environmental hazard.
·Aquatic Toxicity Rating: TLM 96: >1,000 ppm. A fungicide.

SECTION 13. DISPOSAL CONSIDERATIONS

·WASTE DISPOSAL: Material should be disposed of as hazardous waste in accordance with Federal, state, and local environmental regulations.
·EUROPEAN COMMUNITY WASTE DISPOSAL KEY: Not known
·UNCLEANED PACKAGINGS: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

·DOT I.D. NO.: NOT REGULATED
·DOT SHIPPING NAME: HIGH TEMPERATURE BONDING MORTAR
·DOT HAZARD CLASS: NOT REGULATED
·DOT LABEL: NONE
·OTHER: NA

SECTION 15. REGULATORY INFORMATION

·U.S. FEDERAL REGULATIONS:

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

·SARA TITLE III:
·Section 302 Extremely Hazardous Substances: None above detection limits.

·Section 311/312 (40 CFR 370) Hazardous Categories:
·Carcinogen
·Chronic
·Toxic

·Section 313: Toxic Categories (40 CFR 370)Toxic chemicals above "De Minimis" level are:
·There are no listed chemicals above detection limits in this compound.

CERCLA:
·None

·STATE REGULATIONS:
·California: Proposition 65 substances (components) 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 levels prescribed in the regulations. Therefore, it is the user's responsibility to determine if the percent of hazardous/carcinogenic ingredients listed elsewhere in the MSDS comply with State of California regulations.

PRODUCT NAME: **CA-0100 CAPPING COMPOUND, TESTMARK**
ITEM NUMBER: CA-0100
ITEM DESCRIPTION: CAPPING COMPOUND, TESTMARK
REVISION DATE: 06/25/09

CANADA
·This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by CPR.

·CANADA
·DSL: Components included on inventory.

WHMIS HAZARD CLASS(ES):
·Class D, Division 2, Subdivision A: Materials cause other toxic effects, very toxic material.

WHMIS TRADE SECRET REGISTRY NUMBER(S): Not Applicable

WHMIS SYMBOLS:
·Stylized T
·Flame on line

·EUROPEAN ECONOMIC COMMUNITY (EEC)
EINECS Inventory: Components included on inventory

EEC SYMBOL(S):
·Irritant

EEC RISK PHRASES:
·R20/21 Harmful by inhalation and in contact with skin.
·R36 Irritating to eyes.
·R44 Risk of explosion if heated under confinement.

EEC SAFETY PHRASES
·S13 Keep away from food, drink, and animal feeding stuffs.
·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 or supplier for information on recovery and recycling.

SECTION 16. OTHER INFORMATION

·This MSDS contains information and recommendations based upon our present knowledge and data believed to be reliable. All data shown here are subject to reasonable variation and are supplied as an accommodation to the buyer. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. This MSDS applies only to the product in its "as manufactured" state, since the application to which the product is subjected may change its characteristics. The buyer is responsible for determining the safety, toxicity, and suitability of the product under the conditions of their use of the product. Buyers also have the responsibility for insuring that the MSDS is available to their employees, product users, and handlers.

PRODUCT NAME: **CA-0100 CAPPING COMPOUND, TESTMARK**
ITEM NUMBER: CA-0100
ITEM DESCRIPTION: CAPPING COMPOUND, TESTMARK
REVISION DATE: 06/25/09

PREPARER'S NAME: Gary Hall
PHONE NUMBER: 01-412-963-0303
E-Mail: Gary.Hall@sauereisen.com

·NAV=NOT AVAILABLE NE=NOT ESTABLISHED NA=NOT APPLICABLE ND=NOT DETERMINED EV=UNDER EVALUATION