

SAUEREISEN

MANHOLE CHIMNEYSEAL NO. F-88

Sauereisen Manhole ChimneySeal No. F-88 is an elastomeric lining composed of fiber-reinforced, asphalt-modified urethane. ChimneySeal is used as a chemical-resistant membrane or gasket seal for the prevention of water infiltration.

Manhole ChimneySeal has excellent adhesion to most substrates. As a high solids elastomer, it is recommended when movement from temperature change or other causes will be encountered.

Manhole ChimneySeal maintains excellent elasticity and adhesion over a temperature range of -30°F to 250°F. The flexible barrier resists freeze/thaw stresses and movement. When subjected to mechanical stress, the lining has nearly 100% recovery. Manhole ChimneySeal also resists alkalis, salts and acid.

CHARACTERISTICS

- o Outstanding chemical resistance to acids and alkalis.
- o Remains flexible from -30°F to 250°F.
- o Easy to apply by hand.
- o Urethane-based elastomer.
- o Suitable for application on steel, brick or concrete substrates.
- o Excellent elasticity.

AREA PREPARATION

Temperature of Working Area

Maintain an optimum temperature of 60° - 85°F on air, substrate and material during mixing, application, and cure. Store material in the range of 65° - 80°F for at least 48 hours before use.

Surface Preparation

Surfaces should be made free of oil, grease, water, and other contaminants that may inhibit bond. This can be achieved by chemical cleaning.

PHYSICAL PROPERTIES

Abrasion Resistance ASTM (D-4060)	534 mg/1,000 cycles
Elongation ASTM (D-638)	126.4 %
Shore A durometer Hardness ASTM (D-2240)	48
Tensile strength (ASTM D-638)	54.1 lb./in ²
Water Absorption ASTM (D-570)	0.05%
Hydrostatic Pressure (ASTM C 497)	80 ft water head (35psi)

Physical properties were determined on specimens prepared under laboratory conditions using applicable ASTM procedures. Actual field conditions may vary and yield different results; therefore, data are subject to reasonable deviation.

Brick - The working substrate must be dry and firm enough to withstand imposed loads during normal operation. Mechanical methods should be utilized to remove old paints, coatings, and deteriorated mortar or brick.

Abrasive blast or high-pressure water blast brick to obtain a uniform, sound substrate. All prepared surfaces must be allowed to dry prior to the Manhole ChimneySeal application.

Concrete - The working substrate must be dry and have the necessary strength to withstand imposed loads during normal operation. For applications where Manhole ChimneySeal is recommended. All voids should be filled with Sauereisen Underlayment No. F-120 or Filler Compound No. 209. The choice of underlayment will depend on the severity of the voids to be filled.

Abrasive blast or high-pressure water blast concrete to remove laitance and to obtain a uniform surface texture exposing fine aggregate resembling coarse sandpaper.

Regardless of preparation method used, all surfaces must be free of any loose deposits or contamination.

Metal - Abrasive blast or mechanically abrade the metal surface to a nominal 2.5 mil profile employing a SSPC-SP 6 Commercial finish. All protrusions should be ground smooth to eliminate sharp edges.

APPLICATION

Mixing

Packaging consists of premeasured, unitized containers of Hardener Part A and Resin Part B. Completely empty contents of Hardener Part A into Resin Part B. Using a slow speed 1/2 inch drill motor affixed with a "Jiffy" type blade, mix for 5 minutes. Thorough mixing of this material is very important.

Mix only complete batches. Material which has begun to set must be discarded. Do not add any adulterants to either component or mixed material.

Installation

Manhole ChimneySeal is self-priming and applied at various thicknesses depending upon specification design parameters. Manhole ChimneySeal is easily applied by gloved hand (neoprene or rubber). The most practical method of applying the product within small diameter structures is to wipe the material on with a gloved hand or trowel.

SETTING/CURING

Curing of the ChimneySeal lining is by chemical reaction. While Manhole ChimneySeal has an approximate working time of 45 minutes, initial set occurs in about one hour at 70°F. Manhole ChimneySeal cures to a semi-soft, elastomeric state. Protect the installation site from water or chemicals prior to cure for 48 hours.

TESTING

For specific applications, a holiday detector can be utilized to ensure a continuous, pinhole-free lining. Pinhole testing should occur after 24 hours at 70°F using a Tinker & Razor Holiday Detector or similar model. Voltage will be dependent on coating thickness. Consult a Sauereisen representative for details.

COVERAGE

Following is typical coverage of No. F-88:

1-Gallon Unit

12.8 ft² at 1/8-inch (125 mils) thick

Actual coverage may vary depending on jobsite conditions and surface irregularities.

CLEAN-UP

All equipment should be cleaned with a general orange solvent or mineral spirits within one (1) hour after use and after each day's use. If removal is required after cure, consult Sauereisen for recommendations.

PACKAGING

1-Gallon Unit

Hardener Part A - 6.5 lbs in a pint container
Resin Part B - 6.9 lbs in a 2-gal. pail

SHELF LIFE

Sauereisen Manhole ChimneySeal has a shelf life of one (1) year when stored in unopened, tightly sealed containers in a dry location at 70°F. If there is a doubt as to the quality of the materials, consult a Sauereisen representative.

CAUTION

Consult Material Safety Data Sheets and container label Caution Statements for hazards in handling these materials.

WARRANTY

We warrant that our goods will conform to the description contained in the order, and that we have good title to all goods sold. WE GIVE NO WARRANTY, WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE OR OTHERWISE, EXPRESS OR IMPLIED, OTHER THAN AS EXPRESSLY SET FORTH HEREIN. We are glad to offer suggestions or to refer you to customers using Sauereisen cements and compounds for a similar application. Users shall determine the suitability of the product for intended application before using, and users assume all risk and liability whatsoever in connection therewith regardless of any suggestions as to application or construction. In no event shall we be liable hereunder or otherwise for incidental or consequential damages. Our liability and your exclusive remedy hereunder or otherwise, in law or in equity, shall be expressly limited to our replacement of non-conforming goods at our factory or, at our sole option, to repayment of the purchase price of non-conforming goods.

- o **Distributors and agents in major cities throughout the world. Consult manufacturer for locations.**
- o **Information concerning government safety regulations available upon request.**
- o **Sauereisen also produces inorganic compounds for assembling, sealing, electrically insulating and grouting.**

SAUEREISEN ...since 1899
160 Gamma Drive
Pittsburgh, PA 15238-2989 USA
Phone 412.963.0303 Fax 412.963.7620
www.sauereisen.com

SAFETY DATA SHEET

Proprietary SDS.

Date Prepared : 1/8/2015

SDS No : SCC-F88A

F88 Chimney Seal, Part A, Hardener

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: F88 Chimney Seal, Part A, Hardener
PRODUCT DESCRIPTION: Chimney Seal, Part A, Hardener
PRODUCT CODE: F88GA
PRODUCT FORMULATION NAME: F88 Chimney Seal
CHEMICAL FAMILY: Aromatic Isocyanate Mixture

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: x244

E-Mail: gdmaloney@sauereisen.com

24 HR. EMERGENCY TELEPHONE NUMBERS

Poison Control Center (Medical) : (877) 800-5553

CANUTEC (Canadian Transportation) : (613) 996-6666

CHEMTREC (US Transportation) : (800) 424-9300

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Skin Irritation, Category 2

Eye Irritation, Category 2A

Respiratory Sensitization, Category 1B

GHS LABEL



Exclamation
mark



Health
hazard

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H319: Causes serious eye irritation.

H315: Causes skin irritation.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

PRECAUTIONARY STATEMENTS

Prevention:

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P264: Wash ... thoroughly after handling.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P285: In case of inadequate ventilation wear respiratory protection.

Response:

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P321: Specific treatment (see ... on this label).

P332+P313: If skin irritation 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.

P337+P313: If eye irritation persists: Get medical advice/attention.

P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Disposal:

58525E4V: Dispose of contents/container to in accordance with local/national regulations

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Methylenediphenyl Diisocyanate	< 55	26447-40-5
phenyl isocyanate	< 0.1	103-71-9
Methylene Bisphenyl Isocyanate	< 10	101-68-8
Polymeric Isocyanates	< 55	9016-87-9

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 promptly with soap and water. If soaked through clothing, promptly remove clothing and wash skin. Launder clothing before reuse. Discard saturated shoes and leather clothing. For severe exposures, get under safety hower after removing clothing. Do not apply greases or ointments.

Seek medical attention for incidents of significant exposure or if effects apparent.

INGESTION: If swallowed, do not induce vomiting. Give large quantities of water. Seek medical attention immediately. Never give anything by mouth to an unconscious person.

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. Seek Medical attention. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Consult a physician should this occur.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Liquids, aerosols, or vapors are irritating and can cause tearing, reddening or swelling. If left untreated, corneal damage can occur and injury is slow to heal. Damage is usually reversible.

SKIN: Isocyanates react with skin proteins and moisture and can cause irritation which may include reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

SKIN ABSORPTION: Prolonged contact with Isocyanates can cause skin sensitization. Animal tests have indicated that respiratory sensitization can result from skin contact. This data reinforces the need to prevent direct skin contact with MDI.

INGESTION: Can result in irritation and corrosive action in the mouth, stomach tissue, and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

INHALATION: MDI (Methylenediphenyl Diisocyanate) vapors or mist at concentrations above the TLV can irritate the mucous membranes in the respiratory tracts (nose, throat and lungs), causing runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function.

ACUTE TOXICITY: Persons with a preexisting, nonspecific bronchial hyper reactivity can respond to concentrations below the TLV with similar symptoms as well as an asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasms, and pulmonary edema (fluid in the lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure.

CHRONIC EFFECTS: As a result of previous repeated overexposures or a single large dose, certain individuals develop

isocyanate sensitization (Chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath, or asthma attack, could be immediate or delayed up to several hours after exposure. Similar to many non specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure persists for weeks and in severe cases for years. Overexposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

NOTES TO PHYSICIAN: Medical conditions aggravated by exposure: Asthma, other respiratory disorders (Bronchitis, emphysema and bronchial hyperactivity), skin allergies, and eczema.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water, carbon dioxide, dry chemical, and foam.

HAZARDOUS COMBUSTION PRODUCTS: Combustion products may be toxic.

EXPLOSION HAZARDS: Not sensitive to mechanical impact or static discharge

FIRE FIGHTING PROCEDURES: Full emergency equipment including self contained breathing apparatus should be worn.

FIRE EXPLOSION: At temperatures above 400F (204 C) polymeric MDI can polymerize and decompose which can cause pressure build up in closed containers. Use cold water to cool fire exposed containers and prevent explosive rupture.

SENSITIVE TO STATIC DISCHARGE: None

SENSITIVITY TO IMPACT: None

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and carbon dioxide, nitrogen oxides, traces of hydrogen cyanide, MDI vapors and various complex hydrocarbons or aerosols.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Evacuate and ventilate spill area. Dike spill to prevent entry into water system. Absorb isocyanates with sawdust or other absorbent. Shovel into suitable unsealed containers. Transport to well-ventilated area (outside) and treat with neutralizing solution. Neutralizing solution: mixture of water (80%) with non-ionic surfactant tergitol tmn-10 (20%) or water (90%); concentrated ammonia (3-8%); detergent (2%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO₂ escape. Clean-up: decontaminate floor with decontamination solution, letting stand for at least 15 minutes.

LARGE SPILL: Large quantities may be pumped into closed but not sealed containers for disposal.

SPECIAL PROTECTIVE EQUIPMENT: Wear full protective equipment, including respiratory equipment during clean-up.

7. HANDLING AND STORAGE

GENERAL PROCEDURES:

Avoid contact with eyes, skin, and clothing.

For industrial use only!

Harmful if inhaled.

Do not take internally.

May cause irritation.

Do not eat, drink or smoke when using this product.

Wear chemical splash goggles, gloves and protective clothing.

Avoid high ambient temperatures and humidity.

Wash thoroughly after handling.

STORAGE: Store in a cool, dry place.

Keep container closed when not in use.

Store away from direct heat and flame.

Keep away from food and drinking water.

DO NOT SMOKE where product is used or stored.

Store in a well-ventilated place.

COMMENTS:

*This material is designed to be pumped, not sprayed, MDI becomes more hazardous when atomized (sprayed). The hazard data is derived from tests

performed when the material is sprayed and should be considered, but may not apply to pumping operations. Internal hygiene studies have found MDI airborne levels to be less than 0.006 mg/m³.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)						
			EXPOSURE LIMITS			
			OSHA PEL		ACGIH TLV	
Chemical Name			ppm	mg/m ³	ppm	mg/m ³
Methylenediphenyl Diisocyanate	TWA		.02		.005	
Methylene Bisphenyl Isocyanate	TWA				0.005	0.051

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Liquid chemical goggles. Vapor resistant goggles should be worn if contact lenses are in use. In a splash hazard environment, chemical goggles should be used in combination with a full face shield.

SKIN: Suitable protective gloves (neoprene, butyl rubber, or viton). Clothing should be clean, long-sleeved workclothes. Synthetic apron. Boots. Wash thoroughly before eating, smoking, applying cosmetics, etc. Thoroughly launder work clothes before reuse. Safety shower nearby.

RESPIRATORY:

Concentrations greater than TLV can occur when MDI is used in a poorly ventilated area. In such cases, or whenever concentrations of MDI exceed the TLV, respiratory protection must be worn. A supplied air respirator or a positive pressure self-contained breathing apparatus is recommended. In situations where MDI is not sprayed or heated and a supplied air or self-contained apparatus is unavailable or its use impractical, at least an air purifying respirator equipped with an organic cartridge and a particulate filter must be worn. However, this should be permitted only for short periods of time (less than one hour) at relatively low concentrations (at or near the TLV). However, due to the poor warning properties of MDI, proper fit and timely replacement of filter elements must be insured. Observe OSHA Regulations for respirator usage (29 CFR Part 1910.134).

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: Musty

ODOR THRESHOLD: Not Available

APPEARANCE: Liquid

COLOR: Dark brown

pH: Not Established

PERCENT VOLATILE: Negligible

FLASH POINT AND METHOD: (390°F)

FLAMMABLE LIMITS: NE to NE

VAPOR PRESSURE: Negligible

VAPOR DENSITY: 8.5

BOILING POINT: (406°F)

FREEZING POINT: (32°F)

MELTING POINT: (32°F)

SOLUBILITY IN WATER: Insoluble

EVAPORATION RATE: NA = Not Applicable

SPECIFIC GRAVITY: 1.2

(VOC): 110.100

10. STABILITY AND REACTIVITY**STABLE:** Yes**HAZARDOUS POLYMERIZATION:** Yes**STABILITY:** Not yet Known**POLYMERIZATION:** May occur. Conditions to avoid: moisture, and other isocyanate reactive materials or excessive temperatures above 400F may cause polymerization/**CONDITIONS TO AVOID:** Contamination with water and high temperatures.**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, nitrogen oxides, traces of hydrogen cyanide, MDI vapors and various complex hydrocarbons/**INCOMPATIBLE MATERIALS:** (Materials to Avoid) water, amines, strong bases and alcohols. Will cause some corrosion to copper alloys and aluminum.**11. TOXICOLOGICAL INFORMATION****ACUTE****DERMAL LD₅₀:** > 7900 mg/kg (rabbit)**ORAL LD₅₀:** > 15800 mg/kg (rat)**INHALATION LC₅₀:** 370 -490 ppm / 4 hours (rat)**EYE EFFECTS:** Slightly irritating**SKIN EFFECTS:** Slight to moderate irritant.**CHRONIC:**

Pulmonary irritation and inflammation of the upper respiratory tract are the primary ill-effects following extended exposures to aerosols or vapors of MDI, both polymeric and monomeric forms. A 90-day inhalation study in rats of a polymeric MDI (50% monomeric MDI) delivered as an aerosol (6 hr/day, 5 day/week) induced moderate to severe hyperplastic/inflammatory lesions of the nasal cavity and lungs at exposures of 8 mg/m³ and greater. These effects were minimal at 4 mg/m³. The no observable effect level is 2-3 mg/m³.

IRRITATION: Eye, Skin and Inhalation Irritant.**SENSITIZATION:** Skin and Respiratory sensitizer.**REPRODUCTIVE EFFECTS:** No Data Available**MUTAGENICITY:** Monomeric MDI is positive in the Ames assay (with hepatic microsomal activation). However, it was negative in an invivo-invivo micronucleus assay.**GENERAL COMMENTS:** The International Isocyanate Institute is sponsoring a lifetime inhalation study on polymeric MDI in rats. This study is currently underway.**12. ECOLOGICAL INFORMATION****ENVIRONMENTAL DATA:** No data available. Contact Env. Dept.**BIOACCUMULATION/ACCUMULATION:** No data available. Contact Env. Dept.**AQUATIC TOXICITY (ACUTE):** LC 50, 24 hours greater than 500 mg/L for daphnia magna, limnea stagnalis and zebra fish. for both polymeric and monomeric MDI.**13. DISPOSAL CONSIDERATIONS****DISPOSAL METHOD:** Material should be disposed of as hazardous waste in accordance with Federal, state and local environmental regulations. Dispose of containers with any amount of liquid material as hazardous waste.

Dilution followed by incineration is the preferred disposal method. Dilute 10:1 with a clean compatible and combustible solvent, e.g. #2 fuel oil or mineral oil, to reduce reactivity hazards during incineration, handling and transportation.

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

14. TRANSPORT INFORMATION**DOT (DEPARTMENT OF TRANSPORTATION)****PROPER SHIPPING NAME:** Not Regulated**TECHNICAL NAME:** NA = Not Applicable**PRIMARY HAZARD CLASS/DIVISION:** Not Regulated**UN/NA NUMBER:** NA**PACKING GROUP:** NA**15. REGULATORY INFORMATION****UNITED STATES****DOT LABEL SYMBOL AND HAZARD CLASSIFICATION**

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R36/37/38: Irritating to eyes, respiratory system and skin.

S3/9/14: Keep in a cool, well-ventilated place away from...

See section 10 for list of incompatible materials

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S49: Keep only in the original container.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**311/312 HAZARD CATEGORIES:** Acute. Chronic.**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.**EPCRA SECTION 313 SUPPLIER NOTIFICATION**

Chemical Name	Wt.%	CAS
Methylene Bisphenyl Isocyanate	< 10	101-68-8
Polymeric Isocyanates	< 55	9016-87-9

TITLE III NOTES: None above detection limits.**CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)**

Chemical Name	Wt.%	CERCLA RQ
Methylene Bisphenyl Isocyanate	< 10	5,000

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Methylenediphenyl Diisocyanate	26447-40-5
phenyl isocyanate	103-71-9
Methylene Bisphenyl Isocyanate	101-68-8
Polymeric Isocyanates	9016-87-9

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

Combustible
Liquid

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R36/37/38: Irritating to eyes, respiratory system and skin.

S3/9/14: Keep in a cool, well-ventilated place away from...

See section 10 for list of incompatible materials

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S49: Keep only in the original container.

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

DOMESTIC SUBSTANCE LIST (INVENTORY): Components included on inventory

16. OTHER INFORMATION

PREPARED BY: John A Kozak **Date Prepared:** 1/8/2015

HMIS RATING

HEALTH	<input type="checkbox"/>	3
FLAMMABILITY	<input type="checkbox"/>	1
PHYSICAL HAZARD	<input type="checkbox"/>	1
PERSONAL PROTECTION	<input type="checkbox"/>	H

SAFETY DATA SHEET

Proprietary SDS.

Date Prepared : 1/8/2015

SDS No : SCC-F88B

F88 Chimney Seal, Part B

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: F88 Chimney Seal, Part B
PRODUCT DESCRIPTION: Chimney Seal, Part B, Urethane Membrane
PRODUCT CODE: F88GB
PRODUCT FORMULATION NAME: F88 Chimney Seal, Part B
CHEMICAL FAMILY: Urethane

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: x244
E-Mail: gdmaloney@sauereisen.com

24 HR. EMERGENCY TELEPHONE NUMBERS

Poison Control Center (Medical) : (877) 800-5553
CANUTEC (Canadian Transportation) : (613) 996-6666
CHEMTREC (US Transportation) : (800) 424-9300

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Acute Toxicity (Oral), Category 4
Eye Irritation, Category 2B
Skin Irritation, Category 2
Respiratory Tract Irritation, Category 3
Acute Toxicity (Dermal), Category 5

GHS LABEL



Exclamation
mark

SIGNAL WORD: WARNING

HAZARD STATEMENTS

H315: Causes skin irritation.
H227: Combustible liquid.
H320: Causes eye irritation.
H302: Harmful if swallowed.
H335: May cause respiratory irritation.
H313: May be harmful in contact with skin.

PRECAUTIONARY STATEMENTS

Prevention:

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.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P271: Use only outdoors or in a well-ventilated area.

Response:

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330: Rinse mouth.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P321: Specific treatment (see ... on this label).

P332+P313: If skin irritation occurs: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

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.

P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

Disposal:

58525E4V: Dispose of contents/container to in accordance with local/national regulations

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
asphalt (cutback)	< 15	8052-42-4
Distillates, Petroleum, Hydrotreated Heavy Naphthenic	< 20	64742-52-5
1,3-butadiene	< 60	106-99-0

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 contact area thoroughly with soap and water. Remove contaminated clothing. Launder before reuse. Seek medical attention if erythema develops.

INGESTION: If swallowed, do not induce vomiting. Give large quantities of water. Seek medical attention immediately. Never give anything by mouth to an unconscious person.

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: Can cause redness, tearing, Irritation, inflammation and corneal opacity.

SKIN: Moderate irritation and dryness. Prolonged or repeated exposure may result in sensitization.

INHALATION: Inhalation may cause dizziness, stupor, unconsciousness, central nervous system depression, weakness, vomiting, drowsiness, blurred vision, headache and nausea.

CHRONIC EFFECTS: Prolonged or repeated exposure may cause asthma and skin sensitization or other allergic response. Ingestion may cause bleeding of the gastrointestinal tract and the vomiting of blood.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Do not use water, which may spread fire. Extinguish with foam, dry chemical, carbon dioxide, earth or sand.

HAZARDOUS COMBUSTION PRODUCTS: Combustion products may be toxic.

EXPLOSION HAZARDS: Not sensitive to mechanical impact or static discharge

FIRE FIGHTING PROCEDURES: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with 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: Sudden reaction and fire may result if this product is mixed with an oxidizing agent. Cool fire exposed containers with water.

SENSITIVE TO STATIC DISCHARGE: None

SENSITIVITY TO IMPACT: None

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb with non-combustible, granular material (e.g. sand) Remove by mechanical means and place material in covered container temporarily for later disposal.

LARGE SPILL: Evacuate area. Turn off ignition sources. Stop leak, if possible without risk. Wear self-contained breathing apparatus and full protective clothing during clean up. Dike spill and pump into salvage tank. Absorb remaining liquid with sand or other non-combustible, granular material. Remove by mechanical means.

7. HANDLING AND STORAGE

GENERAL PROCEDURES:

Avoid contact with eyes, skin, and clothing.
For industrial use only! Do not take internally.
May cause irritation.
Do not eat, drink or smoke when using this product.
Wear chemical splash goggles, gloves and protective clothing.
Avoid high ambient temperatures and humidity.
Wash thoroughly after handling.

STORAGE: Store in a cool, dry place.

Keep container closed when not in use.
Store away from direct heat and flame.
Keep away from food and drinking water.
Store out of direct sunlight.
DO NOT SMOKE where product is used or stored.
Store in a well-ventilated place.
Always mix well before using.
Store away from combustible and incompatible materials.
Ground containers when transferring materials.
Remove all sources of ignition or sparks from area.
Empty containers may have residue and flammable vapors. Do not expose to head, cut, weld, or puncture empty container

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
asphalt (cutback)	TWA				5		
Distillates, Petroleum, Hydrotreated Heavy Naphthenic	TWA				5	NL	NL
	STEL		5			NL	NL
1,3-butadiene	TWA	1	-	2	4.4		
	STEL	5					

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Chemical resistant goggles and/or face shield.

SKIN: Suitable protective gloves (neoprene, butyl rubber, or viton). Clothing should be clean, long-sleeved workclothes. Synthetic apron. Boots. Wash thoroughly before eating, smoking, applying cosmetics, etc. Thoroughly launder work clothes before reuse. Safety shower nearby.

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: Wash contact area thoroughly with soap and water. Remove contaminated clothing. Launder before reuse. Seek medical attention if erythema develops.

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: Characteristic Asphalt odor

APPEARANCE: Liquid

COLOR: Black

pH: NA = Not Applicable

PERCENT VOLATILE: 0

FLASH POINT AND METHOD: (325°F)

FLAMMABLE LIMITS: NE to NE

AUTOIGNITION TEMPERATURE: Not Established

VAPOR PRESSURE: 16

VAPOR DENSITY: 16

BOILING POINT: > (350°F)

SOLUBILITY IN WATER: Insoluble

SPECIFIC GRAVITY: 1

(VOC): 96.000

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

STABILITY: Stable under normal conditions of use and storage.

POLYMERIZATION: None

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, various complex organic compounds

INCOMPATIBLE MATERIALS: Materials to avoid: Strong oxidants such as liquid chlorine, pure oxygen, or calcium hypochloride.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: > 2000 mg/kg (rabbit)

ORAL LD₅₀: 2000 mg/kg (rat)

INHALATION LC₅₀: Not Available

EYE EFFECTS: Irritant.

SKIN EFFECTS: Irritant.

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

IRRITATION: Eye, Skin and Inhalation Irritant.

SENSITIZATION: Skin and Respiratory sensitizer.

NEUROTOXICITY: Petroleum naphtha distillates vapor is a central nervous system depressant.

TARGET ORGANS: May cause Liver or Kidney damage, may affect the blood or blood-forming organs.

TERATOGENIC EFFECTS: No Data Available

MUTAGENICITY: No Data Available

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: May be dangerous if it enters water intakes. Notify Local health and Pollution control officials. Notify operators of nearby water intakes.

Asphalt can have disastrous effects on bottom life.

AQUATIC TOXICITY (ACUTE): TLM 96 > 1000 ppm

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.

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

PRIMARY HAZARD CLASS/DIVISION: Not Regulated

UN/NA NUMBER: NA

PACKING GROUP: NA

LABEL: NA = Not Applicable

ROAD AND RAIL (ADR/RID)

PROPER SHIPPING NAME: Not Regulated

UN NUMBER: NA

HAZARD CLASS: Not Regulated

PACKING GROUP: NA**LABEL:** None**AIR (ICAO/IATA)****SHIPPING NAME:** Not Regulated**TECHNICAL NAME:** NA = Not Applicable**UN/NA NUMBER:** NA**PRIMARY HAZARD CLASS/DIVISION:** Not Regulated**PACKING GROUP:** NA**VESSEL (IMO/IMDG)****SHIPPING NAME:** Not Regulated**TECHNICAL NAME:** NA = Not Applicable**UN/NA NUMBER:** NA**PRIMARY HAZARD CLASS/DIVISION:** Not Regulated**PACKING GROUP:** NA**CANADA TRANSPORT OF DANGEROUS GOODS****SHIPPING NAME:** Not Regulated**UN/NA NUMBER:** NA**PRIMARY HAZARD CLASS/DIVISION:** Not Regulated**PACKING GROUP:** NA**LABEL:** None**15. REGULATORY INFORMATION****UNITED STATES****DOT LABEL SYMBOL AND HAZARD CLASSIFICATION**

R18: In use, may form flammable/explosive vapour-air mixture.

R21/22: Harmful in contact with skin and if swallowed.

S20/21: When using do not eat, drink or smoke.

S24/25: Avoid contact with skin and eyes.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S7/8: Keep container tightly closed and dry.

S7/9: Keep container tightly closed and in a well-ventilated place.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**311/312 HAZARD CATEGORIES:** Chronic. Fire Hazard. Irritant.**FIRE:** Yes **ACUTE:** Yes**313 REPORTABLE INGREDIENTS:** There are no listed chemicals above detection limits in this compound.**EPCRA SECTION 313 SUPPLIER NOTIFICATION**

Chemical Name	Wt.%	CAS
1,3-butadiene	< 60	106-99-0

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

Chemical Name	Wt.%	CERCLA RQ
1,3-butadiene	< 60	10

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
asphalt (cutback)	8052-42-4
Distillates, Petroleum, Hydrotreated Heavy Naphthenic	64742-52-5
1,3-butadiene	106-99-0

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

CLEAN AIR ACT

Chemical Name	Wt.%	CAS
1,3-butadiene	< 60	106-99-0

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.

Chemical Name	Wt.%	Listed
1,3-butadiene	< 60	<ul style="list-style-type: none"> ● Cancer ● Developmental Toxicity ● Female Reproductive ● Male Reproductive

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

Combustible
Liquid

R18: In use, may form flammable/explosive vapour-air mixture.

R21/22: Harmful in contact with skin and if swallowed.

S20/21: When using do not eat, drink or smoke.

S24/25: Avoid contact with skin and eyes.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S7/8: Keep container tightly closed and dry.

S7/9: Keep container tightly closed and in a well-ventilated place.

WHMIS CLASS: Class B, Division 2, Flammable Liquid.

Class D, Division 2, Subdivision B: Materials cause other toxic effects, toxic material.

DOMESTIC SUBSTANCE LIST (INVENTORY): Components included on inventory

16. OTHER INFORMATION

PREPARED BY: John A Kozak **Date Prepared:** 1/8/2015

HMIS RATING

HEALTH	<input type="text" value="1"/>	1
FLAMMABILITY	<input type="text" value="1"/>	1
PHYSICAL HAZARD	<input type="text" value="0"/>	0
PERSONAL PROTECTION	<input type="text" value="H"/>	H

160 Gamma Drive
Pittsburgh, PA 15238
Tele: 412.963.0303
Fax: 412.963.7620
Email: pjjansen@sauereisen.com
www.sauereisen.com

SAUEREISEN

November 9, 2016

RE: Qualified Applicator

To Whom It May Concern:

This is to certify that the personnel of Municipal & Contractors Sealing Products, Inc. are trained and approved in the handling, mixing and application of Sauereisen products. They have demonstrated that they are experienced and qualified to apply all Sauereisen restoration products including our rehabilitation and corrosion-resistant wastewater lining systems.

If there are any questions regarding this matter please direct them to my attention.

Sincerely,

A handwritten signature in black ink that reads "Pete J. Jansen". The signature is written in a cursive style with a large initial "P" and "J".

Pete J. Jansen
Midwestern Regional Manager
Sauereisen, Inc.