



**SAFETY DATA SHEET
PERMA CEMENT**

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

| | |
|--|--|
| Product Name: PERMA CEMENT | Product Use: Concrete Repair Product |
| Manufacturer's Name: CGM Incorporated | Emergency Telephone: 215-638-4400 OR 800-523-6570 |
| Address: 1445 Ford Road, Bensalem, PA 19020 | Telephone Number: 215-638-4400 |
| Date Prepared: JUNE 2013 | Date Updated: September 30, 2018 |

SECTION 2: HAZARDS IDENTIFICATION

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|---|
| HAZARD CLASSIFICATION |
| Skin Irritation 2 Serious Eye Damage 1 Skin Sensitization 1 Carcinogenicity 1A Specific Target Organ Toxicity – Single Exposure 3 Specific Target Organ Toxicity – Repeated Exposure 1 |
| LABEL ELEMENTS |
| <p>Hazard Pictogram:</p> |
| <p>Signal Word: Danger</p> <p>Hazard Statement: Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May be harmful if swallowed. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure.</p> <p>Prevention: Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, and face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust. Do not eat, drink or smoke when using this product.</p> <p>Response: <u>If on skin:</u> Wash with plenty of water. Take off contaminated clothing and wash clothing before reuse. <u>If skin irritation or rash occurs:</u> get medical advice and/or attention. <u>If in eyes:</u> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easily removed and continue rinsing. Immediately call a poison center or doctor. <u>If inhaled:</u> Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. <u>If exposed or concerned:</u> Get medical advice and attention.</p> <p>Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.</p> <p>Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.</p> |
| ADDITIONAL INFORMATION |
| <p>Hazards not otherwise classified: Not applicable. 30.0 % of the mixture consists of ingredient(s) of unknown acute toxicity.</p> |

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SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

| MATERIAL OR INGREDIENT | CAS # | WT. % |
|--|--------------|--------------|
| Silica, crystalline, quartz | 14808-60-7 | 40-60 |
| Calcium Aluminate | 65997-16-2 | 10-20 |
| Portland Cement | 65997-15-1 | 5-20 |
| Slag | 65996-69-2 | 5-10 |
| Vinyl Acetate Copolymer | 24937-78-8 | 1-5 |
| Amorphous Silica Fume | 69012-64-2 | 1-3 |
| Exact composition percentage/concentration has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. | | |

SECTION 4: FIRST-AID MEASURES

| DESCRIPTION OF THE FIRST AID MEASURE |
|---|
| <p>Eye: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.</p> <p>Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.</p> <p>Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical advice/attention if you feel unwell.</p> <p>Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Give 2 cupfuls of water if victim is conscience and alert. Get medical advice/attention.</p> |
| IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED |
| <p>Eye: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns in the presence of moisture.</p> <p>Skin: Causes skin irritation. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin. May cause sensitization by skin contact.</p> <p>Inhalation: May cause respiratory tract irritation. May cause burns in the presence of moisture.</p> <p>Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.</p> |
| INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED |
| <p>Note to Physicians: Symptoms may not appear immediately.</p> <p>Specific Treatments: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).</p> |

SECTION 5 – FIRE-FIGHTING MEASURES

| FLAMMABILITY |
|---|
| Flammability: Not flammable by WHMIS/OSHA criteria. |
| EXTINGUISHING MEDIA |
| <p>Suitable Extinguishing Media: Treat for surrounding material. Powder, water spray, foam, carbon dioxide.</p> <p>Unsuitable Extinguishing Media: Not available.</p> |
| SPECIAL HAZARDS ARISING FROM THE CHEMICAL |
| <p>Products of Combustion: May include, and are not limited to: oxides of carbon, sodium and sulfur.</p> <p>Explosion Data: Sensitivity to Mechanical Impact: Not available. Sensitivity to Static Discharge: Not available.</p> |
| SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS |
| Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). |

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SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN - UP

Methods for Containment: Contain spill with inert material (sand, vermiculite, etc.) and place in a suitable container. Do not flush to sewer or allow material to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Cleaning-Up: Vacuum or sweep material and place in a disposal container. Provide adequate ventilation.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Handling: Avoid contact with skin and eyes. Do not swallow. Good housekeeping is important to prevent accumulation of dust. Avoid generating dust. The use of compressed air for cleaning clothing, equipment, etc. is not recommended. Use only in well-ventilated areas. Handle and open container with care. Do not eat or drink when using. Wash hands before eating, drinking, or smoking. (See section 8)

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: Keep out of the reach of children. Store in dust-tight, dry, labeled containers. Keep containers closed when not in use. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Do not store in an area equipped with emergency water sprinklers. Use corrosion-resistant structural materials and lighting and ventilation systems in the storage area. (See section 10)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

Exposure Guidelines

| Ingredient | Occupational Exposure Limits | |
|-----------------------------|--|---|
| | OSHA-PEL | ACGIH-TLV |
| Silica, crystalline, quartz | ((10 mg/m ³)/(%SiO ₂ +2) TWA (resp)) ((30 mg/m ³)/(%SiO ₂ +2) TWA (total)) ((250)/(%SiO ₂ +5) mppcf TWA (resp)) | 0.025 mg/m ³ |
| Calcium Aluminate | 15 mg/m ³ (total); 5 mg/m ³ (resp) | 10 mg/m ³ (total); 5 mg/m ³ (respirable) |
| Portland cement | 15 mg/m ³ (total); 5 mg/m ³ (resp) | 1 mg/m ³ (no asbestos and <1% crystalline silica, respirable fraction) |
| Slag | 15 mg/m ³ TWA (total); 5 mg/m ³ (resp) | 2 mg/m ³ ((total) calcium oxide) |
| Vinyl Acetate Copolymer | 5 mg/m ³ (resp) | 10 mg/m ³ (total) |
| Amorphous Silica Fume | 15 mg/m ³ (total); 5 mg/m ³ (resp) | 10 mg/m ³ (total); 3 mg/m ³ (resp) |

EXPOSURE CONTROLS

Engineering Controls: Use adequate ventilation to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

INDIVIDUAL PROTECTIVE MEASURES

Personal Protective Equipment:

Eye/Face Protection: Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin Protection:

Hand Protection: Wear suitable gloves.

Body Protection: Wear suitable protective clothing.

Respiratory Protection: A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

General Health and Safety Measures: Handle according to established industrial hygiene and safety practices.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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|--|---------------|
| Appearance | Powder |
| Color | Gray |
| Odor | Not Available |
| Odor Threshold | Not Available |
| Physical State | Solid |
| pH | Not Available |
| Melting Point/Freezing Point | Not Available |
| Initial Boiling Point and Boiling Range | Not Available |
| Flash Point | Not Available |
| Evaporation Rate | Not Available |
| Flammability | Not Flammable |
| Lower Flammability/Explosive Limit | Not Available |
| Upper Flammability/Explosive Limit | Not Available |
| Vapor Pressure | Not Available |
| Vapor Density | Not Available |
| Relative Density/Specific Gravity | 2.6 to 2.7 |
| Solubility | Partial |
| Partition coefficient: n-octanol/water | Not Available |
| Auto-Ignition Temperature | Not Available |
| Decomposition Temperature | Not Available |
| Viscosity | Not Available |
| Oxidizing Properties | Not Available |
| Explosive Properties | Not Available |

SECTION 10: STABILITY AND REACTIVITY

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| REACTIVITY |
| No dangerous reaction known under conditions of normal use. |
| CHEMICAL STABILITY |
| Stable under normal storage conditions. Keep dry in storage. |
| POSSIBILITY OF HAZARDOUS REACTIONS |
| No dangerous reaction known under conditions of normal use. |
| CONDITIONS TO AVOID |
| Heat. Incompatible materials. Moisture. |
| INCOMPATIBLE MATERIALS |
| Acids. Ammonium salts. Aluminum. Alkalis. |
| HAZARDOUS DECOMPOSITION PRODUCTS |
| May include, and are not limited to: oxides of carbon. |

SECTION 11: TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Skin contact, skin absorption, eye contact, inhalation, and ingestion.

Symptoms related to physical/chemical/toxicological characteristics:

Eye: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns in the presence of moisture.

Skin: Causes skin irritation. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin. May cause sensitization by skin contact.

Inhalation: May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Acute Toxicity:

| Ingredient | LC50 | LD50 |
|-----------------------------|----------------|------------------------------------|
| Silica, crystalline, quartz | Not available. | Oral 500 mg/kg, rat |
| Calcium Aluminate | Not available. | Not available. |
| Portland Cement | Not available. | Not available. |
| Calcium Oxide (Slag) | Not available. | Intraperitoneal 3059 mg/kg, mouse. |
| Vinyl Acetate Copolymer | Not available. | Not available. |
| Amorphous Silica Fume | Not available. | Not available. |

Calculated overall Chemical Acute Toxicity Values

| LC50 (inhalation) | LD50 (oral) | LD50 (dermal) |
|-------------------|----------------|----------------|
| Not available. | Not available. | Not available. |

| Ingredient | Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)* |
|-----------------------------|---|
| Silica, crystalline, quartz | G-A2, I-1, N-1, O, CP65 |
| Calcium Aluminate | Not listed. |
| Portland Cement | G-A4 |
| Slag | Not listed. |
| Vinyl Acetate Copolymer | Not listed. |
| Amorphous Silica Fume | G-A4 |

(* See Section 15)

DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT-TERM AND LONG-TERM EXPOSURE

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes serious eye damage.

Respiratory Sensitization: Based on available data, the classification criteria are not met.

Skin Sensitization: May cause an allergic skin reaction.

STOT-Single Exposure: May cause respiratory irritation.

Chronic Health Effects:

Carcinogenicity: May cause cancer.

Germ Cell Mutagenicity: This product is not classified as a mutagen.

Reproductive Toxicity:

Developmental: Based on available data, the classification criteria are not met.

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Fertility: Based on available data, the classification criteria are not met.

STOT-Repeated Exposure: Causes damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Based on available data, the classification criteria are not met.

Toxicologically Synergistic Materials: Not available.

Other Information: Not available.

SECTION 12: ECOLOGICAL INFORMATION

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| ECOTOXICITY |
| Acute/Chronic Toxicity: May cause long-term adverse effects in the aquatic environment. |
| PERSISTENCE AND DEGRADABILITY |
| Not available. |
| BIOACCUMULATIVE POTENTIAL |
| Bioaccumulation: Not available. |
| MOBILITY IN SOIL |
| Not available. |
| OTHER ADVERSE EFFECTS |
| Not available. |

SECTION 13: DISPOSAL CONSIDERATIONS

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|---|
| WASTE TREATMENT METHODS |
| Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations. Other Disposal Recommendations: Not available |

SECTION 14: TRANSPORT INFORMATION

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|---|
| UN NUMBER |
| Not regulated. |
| UN PROPER SHIPPING NAME |
| Not applicable. |
| TRANSPORT HAZARD CLASS (ES) |
| Not applicable. |
| ENVIRONMENTAL HAZARDS |
| Not available. |
| SPECIAL PRECAUTIONS |
| Do not handle until all safety precautions have been read and understood. |

SECTION 15: REGULATORY INFORMATION

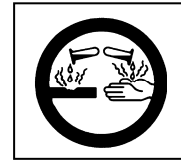
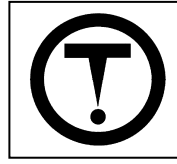
| SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL | | | | |
|--|------------------------------------|----------------------------------|------------------------|--------------------|
| SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 | | | | |
| SARA Title III | | | | |
| Ingredient | Section 302 (EHS) TPQ (lb.) | Section 304 EHS RQ (lbs.) | CERCLA RQ (lb.) | Section 313 |
| Silica, crystalline, quartz | Not listed. | Not listed. | Not listed. | Not listed. |
| Calcium Aluminate | Not listed. | Not listed. | Not listed. | Not listed. |
| Portland Cement | Not listed. | Not listed. | Not listed. | Not listed. |
| Slag | Not listed. | Not listed. | Not listed. | Not listed. |
| Vinyl Acetate Copolymer | Not listed. | Not listed. | Not listed. | Not listed. |
| Amorphous Silica Fume | Not listed. | Not listed. | Not listed. | Not listed. |
| California Proposition 65: This product contains a chemical known to the state of California to cause cancer. | | | | |
| WHMIS Classification(s): | | | | |
| Class D2A – Carcinogenicity | | | | |
| Class D2A - Chronic Toxic Effects | | | | |
| Class D2B - Skin/Eye Irritant | | | | |
| Class E – Corrosive material | | | | |

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TSCA:

| Ingredient | USA TSCA LISTED |
|-----------------------------|------------------------|
| Silica, crystalline, quartz | Yes. |
| Calcium Aluminate | Yes. |
| Portland Cement | Yes. |
| Slag | Yes. |
| Vinyl Acetate Copolymer | Yes. |
| Amorphous Silica Fume | Yes. |

WHMIS Hazard Symbols:



All ingredients used to manufacture this product are listed or exempted from being listed on the TSCA and DSL inventories.

| NFPA National Fire Protection Association | |
|--|---|
| Health: | 1 |
| Fire: | 0 |
| Reactivity: | 0 |

| HMIS-Hazardous Materials Identification System | |
|---|----|
| Health: | 2* |
| Fire: | 0 |
| Reactivity: | 0 |

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

*** SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:**

CP65 California Proposition 65

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

SECTION 16: OTHER INFORMATION

| | |
|-----------------------------|--------------------|
| Date of Preparation: | June 26, 2013 |
| Version: | 1809 |
| Revision Date: | September 19, 2018 |
| Prepared by: | |

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