

# SAFETY DATA SHEET

## SURFACE BONDING CEMENT

### Section 1: PRODUCT AND COMPANY IDENTIFICATION

<b>1.1 Product Name:</b>	Surface Bonding Cement
<b>Product Form:</b>	Mixture
<b>1.2 Product Use:</b>	Dry Stacking Concrete Block
<b>1.3 Supplier/Manufacturer:</b>	Umaco, Inc. 60 Rear Newhall Street Lowell, MA 01852 Phone: 978-453-8881
<b>1.4 Emergency Number:</b>	CHEMTREC (800) 424-9300

### Section 2: HAZARDS IDENTIFICATION

<b>2.1 Classification of the Chemical:</b>	
<b>Hazard Class:</b>	
Acute toxicity	4 (oral)
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
<b>2.2 Label Elements:</b>	
<b>Hazard Pictogram:</b>	
<b>Single Word:</b>	Danger
<b>Hazard Statement:</b>	Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure
<b>Prevention:</b>	Do not eat, drink or smoke when using this product. 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/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust.

<b>Response:</b>	
If Swallowed:	Immediately call a poison center/doctor. Rinse mouth.
If in Eyes:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
If on Skin:	Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs get medical advice/attention. If exposed or concerned get medical advice/attention.
If Inhaled:	Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
<b>Storage:</b>	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
<b>Disposal:</b>	Dispose of contents and container in accordance with all local, regional, national, and international regulations.
<b>2.3 Additional Information:</b>	
<b>Hazards not otherwise classified:</b>	N/A 42.3% of the mixture consists of ingredient(s) of unknown acute toxicity.

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

<b>3.1 Mixtures:</b>			
<b>Ingredient</b>	<b>CAS #</b>	<b>Wt.%</b>	<b>GHS-US Classification</b>
Silica, Crystalline, Quartz	14808-60-7	30-60	Acute Tpx. 4 (Oral) H302 Carc. 1A H350 STOT RE 1 H372
Portland Cement	65997-15-1	15-40	Skin Irrit. 2 H315 Eye Dam. 1 H318 Skin Sens. 1 H317 STOT SE 3 H335
Ferric Oxide	1309-37-1	1-7	Not Classified
Ashes (Residues)	68131-74-8	1-5	Not Classified
Gypsum	13397-24-5	1-5	Not Classified
Calcium Carbonate	1317-65-3	10-35	Not Classified
Magnesium Oxide	1309-48-4	1-5	Not Classified
Calcium Oxide	1305-78-8	1-5	Acute Tox. 4 (Oral) H302 Skin Irrit. 2 H315 Eye Dam. 1 H318 STOT SE 3 H335

The exact percentage (concentration) or chemicals has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

### Section 4: FIRST AID MEASURES

<b>4.1 Description of First Aid Measures:</b>	
<b>Eye:</b>	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.
<b>Skin:</b>	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.
<b>Inhalation:</b>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.
<b>4.2 Most Important Symptoms &amp; Effects both Acute &amp; Delayed:</b>	
<b>Eye:</b>	Causes serious eye damage. May cause burns in the presence of moisture. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
<b>Skin:</b>	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 of allow continuous, prolonged contact with skin. Handling can cause dry skin. May cause sensitization by skin contact.
<b>Inhalation:</b>	May cause respiratory tract irritation.
<b>Ingestion:</b>	Harmful if swallowed. May cause stomach distress, nausea or vomiting.
<b>4.3 Indication of Any Immediate Medical Attention and Special Treatments Needed:</b>	
<b>Note to Physicians:</b>	Symptoms may not appear immediately.
<b>Specific Treatments:</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

## Section 5: FIRE FIGHTING MEASURES

<b>5.1 Extinguishing Media:</b>	
<b>Suitable Extinguishing Media:</b>	Treat for surrounding material
<b>Unsuitable Extinguishing Media:</b>	N/A
<b>5.2 Special Hazards Arising From the Chemical:</b>	
<b>Products of Combustion:</b>	May include, and are not limited to: oxides of carbon
<b>5.3 Special Protective Equipment and Precautions for Fire Fighters:</b>	Keep upwind of fire. Wear full firefighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

## Section 6: ACCIDENTAL RELEASE MEASURES

<b>6.1 Personal Precautions, Protective Equipment and Emergency Procedures:</b>	Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
<b>6.2 Methods and Materials for Containment/Cleanup:</b>	
<b>Methods for Containment:</b>	Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
<b>Methods for Cleanup:</b>	Vacuum or sweep material and place in a disposal container.

## Section 7: HANDLING AND STORAGE

<b>7.1 Precautions for Safe Handling:</b>	
<b>Handling:</b>	Avoid contact with skin and eyes. Do not swallow. Good housekeeping is important to prevent accumulation of dust. Avoid generating and breathing dust. The use of compressed air for cleaning clothing, equipment, etc. is not recommended. Handle and open container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking. (See section 8).
<b>General Hygiene Advice:</b>	Laundry contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.
<b>7.2 Conditions for Safe Storage, Including Any Incompatibilities:</b>	
<b>Storage:</b>	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. (See section 10).

## Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>8.1 Control Parameters:</b>		
<b>Exposure Guidelines:</b>		
<b>Ingredient</b>	<b>OSHA-PEL</b>	<b>ACGIH-TLV</b>
Portland Cement	15 mg/m <sup>3</sup> (total); 5 mg/m <sup>3</sup> (resp)	1 mg/m <sup>3</sup> (no asbestos and <1% crystalline silica, respirable fraction)
Ferric Oxide	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup> (iron oxide fume, dust as Fe)
Silica, Crystalline, Quartz	((10 mg/m <sup>3</sup> )/(%SiO <sub>2</sub> +2) TWA (resp)) ((30 mg/m <sup>3</sup> )/(%SiO <sub>2</sub> +2) TWA (total)) ((250)/(%SiO <sub>2</sub> +5) mppcf TWA (resp))	.025 mg/m <sup>3</sup>
Calcium Oxide	5 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
Gypsum	15 mg/m <sup>3</sup> TWA (total dust) 5 mg/m <sup>3</sup> TWA (respirable fraction)	10 mg/m <sup>3</sup>
Calcium Carbonate	15 mg/m <sup>3</sup> (total); 5 mg/m <sup>3</sup> (resp)	10 mg/m <sup>3</sup>
Magnesium Oxide	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Ashes (residues)	N/A	N/A

<b>8.2 Exposure Controls:</b>	
<b>Engineering Controls:</b>	Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
<b>8.3 Individual Protective Measures:</b>	
<b>Personal Protective Equipment:</b>	
<b>Eye/Face Protection:</b>	Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).
<b>Hand Protection:</b>	Wear suitable waterproof gloves.
<b>Body Protection:</b>	Wear suitable waterproof protective clothing.
<b>Respiratory Protection :</b>	A NIOSH approved dusk mask or filtering face-piece 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).
<b>General Hygiene Considerations:</b>	Handle according to established industrial hygiene and safety practices. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>9.1 Information on Basic Physical and Chemical Properties:</b>	
<b>Appearance:</b>	Powder
<b>Color:</b>	White or Gray
<b>Odor:</b>	No distinct odor
<b>Odor Threshold:</b>	N/A
<b>Physical State:</b>	Powder
<b>pH:</b>	12-13
<b>Viscosity:</b>	N/A
<b>Freezing Point:</b>	N/A
<b>Boiling Point:</b>	N/A
<b>Melting Point:</b>	N/A
<b>Flash Point:</b>	N/A
<b>Evaporation Rate:</b>	N/A
<b>Lower Flammability Limit:</b>	N/A
<b>Vapor Pressure:</b>	N/A
<b>Vapor Density:</b>	N/A
<b>Relative Density:</b>	2.6 to 3.5
<b>Bulk Density:</b>	N/A
<b>Lower Explosion Limit:</b>	N/A
<b>Upper Explosion Limit:</b>	N/A
<b>Solubility in Water:</b>	Slight (0.01 to 1%)
<b>Coefficient of Water/Oil Distribution:</b>	N/A
<b>Auto-ignition Temperature:</b>	N/A
<b>Percent Volatile, wt. %:</b>	N/A
<b>VOC Content, wt. %:</b>	0% N/A; 0 wt, N/A

## Section 10: STABILITY AND REACTIVITY

<b>10.1 Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>10.2 Chemical Stability:</b>	Stable under normal conditions. Keep in dry storage.
<b>10.3 Possibility of Hazardous Reactions:</b>	No dangerous reaction known under conditions of normal use.
<b>10.4 Conditions to Avoid:</b>	Incompatible materials. Moisture.
<b>10.5 Incompatible Materials:</b>	None known.
<b>10.6 Hazardous Decomposition Products:</b>	May include, and are not limited to; oxides of carbon.

## Section 11: TOXICOLOGICAL INFORMATION

<b>11.1 Information on Toxicological Effects</b>	
<b>Likely routes of exposure:</b>	Skin contact, skin absorption, eye contact, inhalation, and ingestion.
<b>Eye:</b>	Irritating to eyes. May cause burns in the presence of moisture. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
<b>Skin:</b>	May cause 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
<b>Ingestion:</b>	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.
<b>Inhalation:</b>	May cause respiratory tract irritation.

	<b>Acute Toxicity:</b>	
<b>Ingredient</b>	<b>LC50</b>	<b>LD50</b>
Silica, Crystalline, Quartz	N/A	Oral 500 mg/kg, rat
Portland Cement	N/A	N/A
Ferric Oxide	N/A	Oral > 10000 mg/kg, rat
Ashes (residues)	N/A	Oral > 2000 mg/kg, rat
Gypsum	N/A	N/A
Calcium Carbonate	N/A	Oral 6450 mg/kg, rat
Magnesium Oxide	N/A	Oral > 5000 mg/kg, rat
Calcium Oxide	N/A	Oral 500 mg/kg, rat

### Calculated Overall Chemical Acute Toxicity Values

LC50 (inhalation): 13.9 mg/L 4 h, rat  
 LD50 (oral): 601.6 mg/kg, rat  
 LD50 (dermal): N/A

<b>Ingredients</b>	<b>Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*</b>
Silica, Crystalline, Quartz	G-A2, I-1, N-1, O, CP65
Portland Cement	G-A4
Ferric Oxide	G-A4, I-3
Ashes (residue)	Not listed
Gypsum	Not listed

Calcium Carbonate	Not listed
Magnesium Oxide	G-A4
Calcium Oxide	Not listed

### 11.2 Delayed, Immediate and Chronic Effects of Short and Long Term Exposure:

<b>Skin Corrosion/Irritation:</b>	Causes skin irritation. May cause burns in the presence of moisture.
<b>Serious Eye Damage/Irritation:</b>	Causes serious eye damage. May cause burns in the presence of moisture.
<b>Respiratory Sensitization:</b>	Based on available data, the classification criteria are not met.
<b>Skin Sensitization:</b>	May cause an allergic skin reaction.
<b>STOT-Single Exposure:</b>	May cause respiratory irritation.
<b>Chronic Health Effects:</b>	Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by the International Agency for Research on Cancer (IARC) and National Toxicology Program (NTP) as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.
<b>Carcinogenicity:</b>	May cause cancer.
<b>Germ Cell Mutagenicity:</b>	This product is not classified as a mutagen.
<b>Reproductive Toxicity:</b>	
Developmental:	Based on available data, the classification criteria are not met.
Fertility:	Based on available data, the classification criteria are not met.
<b>STOT-Repeated Exposure:</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration Hazard:</b>	Based on available data, the classification criteria are not met.
<b>Toxicologically Synergistic Materials:</b>	N/A
<b>Other Information:</b>	N/A



## Section 12: ECOLOGICAL INFORMATION

<b>12.1 Ecotoxicity:</b>	
<b>Acute/Chronic Toxicity:</b>	No ecological consideration when used according to directions. Normal dilution of this product to drains, sewers, septic systems, and treatment plants is not considered environmentally harmful.
<b>12.2 Persistence and Degradability:</b>	N/A
<b>12.3 Bioaccumulative Potential</b>	
<b>Bioaccumulation:</b>	N/A
<b>12.4 Mobility in Soil:</b>	N/A
<b>12.5 Other Adverse Effects:</b>	N/A

## Section 13: DISPOSAL CONSIDERATION

<b>13.1 Waste Treatment Methods:</b>	
<b>Disposal Method:</b>	This material must be disposed of in accordance with local, state, provincial, and federal regulations.
<b>Other disposal recommendations:</b>	N/A

## Section 14: TRANSPORTATION INFORMATION

<b>14.1 UN Number:</b>	Not Regulated
<b>14.2 UN Proper Shipping Name:</b>	Not Applicable
<b>14.3 Transport Hazard Class (ES):</b>	Not Applicable
<b>14.4 Packing Group:</b>	Not Applicable
<b>14.5 Environmental Hazards:</b>	Not Applicable
<b>14.6: Transport in Bulk According to Annex II or Marpol 73/78 and the IBC Code:</b>	Not Applicable
<b>14.7 Special Precautions for User:</b>	Do not handle until all safety precautions have been read and understood

## Section 15: REGULATORY INFORMATION

### 15.1 Safety, Health and Environmental Regulations/Legislations Specific for the Chemical:

MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

SARA Title III:				
Ingredient	Section 302	Section 304	CERCLA	Section 313
Portland Cement	N/A	N/A	N/A	N/A
Ferric Oxide	N/A	N/A	N/A	N/A
Silica, Crystalline, Quartz	N/A	N/A	N/A	N/A

Calcium Oxide	N/A	N/A	N/A	N/A
Gypsum	N/A	N/A	N/A	N/A
Calcium Carbonate	N/A	N/A	N/A	N/A
Magnesium Oxide	N/A	N/A	N/A	N/A
Ashes (Residues)	N/A	N/A	N/A	N/A

**STATE REGULATIONS:**

**California Prop. 65:** This product contains Crystalline Silica, Quartz and may also contain trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

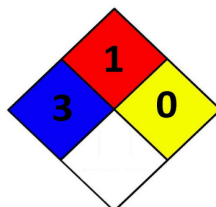
<b>Global Inventories:</b>	
<b>Ingredient</b>	<b>USA/TSCA</b>
Portland Cement	YES
Ferric Oxide	YES
Silica, Crystalline, Quartz	YES
Ashes (Residue)	YES
Calcium Oxide	YES
Gypsum	NO
Calcium Carbonate	YES
Magnesium Oxide	YES

**NFPA: National Fire Protection Association:**

Health: 3  
 Fire: 1  
 Reactivity: 0

<b>Hazard Rating:</b>				
0 = minimal	1 = slight	2 = moderate	3 = severe	4 = extreme

**Mexico Classification:**



Blue = Health	Red = Flammability	Yellow = Reactivity	White = Special
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<b>Source Agency Carcinogen Classifications</b>	
<b>OSHA (O)</b>	<b>Occupational Safety and Health Administration.</b>
<b>ACGIH (G)</b>	<b>American Conference of Governmental Industrial Hygienists.</b> 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.
<b>IARC (I)</b>	<b>International Agency for Research on Cancer.</b> 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.
<b>NTP (N)</b>	<b>National Toxicology Program.</b> 1 - Known to be carcinogens. 2 - Reasonably anticipated to be carcinogens.

### **Section 16: OTHER INFORMATION**

<b>Date of Preparation:</b>	July 1, 2015
<b>Version:</b>	1.0
<b>Revision Date:</b>	July 1, 2015
<b>Disclaimer:</b>	We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.
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