### Section 1: IDENTIFICATION

#### **1.1 PRODUCT IDENTIFIER**

Product Code: Not Available

#### **1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE**

Product Use:

#### **1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEETS**

Mortar

Name/Address:	<b>JAMO</b> 3490 Piedmont Road, Suite 1300 Atlanta, GA 30329
Telephone Number:	(562)-598-8808

#### **1.4 EMERGENCY TELEPHONE NUMBER**

Emergency Telephone	INFOTRAC 1-800-535-5053 (US and Canada)
Number:	INTERNATIONAL + 1-352-323-3500

### Section 2: HAZARD(S) IDENTIFICATION

#### 2.1 CLASSIFICATION OF THE CHEMICAL IN ACCORDANCE WITH PARAGRAPH (d) OF 29 CFR

#### 1910.1200 (OSHA HAZCOM2012)

Skin Irritation	Category 2
Serious Eye Damage	Category 1
STOT-SE	Category 3
STOT-RE	Category 1
Carcinogenicity	Category 1A

#### 2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM2012

2.2a SIGNAL WORD: DANGER!

## 2.2b HAZARD STATEMENTS

Causes skin irritation Causes serious eye damage May cause respiratory irritation Causes damage to organs through prolonged or repeated exposure May cause cancer

2.2c HAZARD PICTOGRAMS



#### 2.2d PRECAUTIONARY STATEMENTS

i.	PREVENTION	Wash hands thoroughly after handling. Do not breathe dust/fume/gas/mist/ vapors/spray. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. 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.
ii.	RESPONSE	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 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 or doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention.
iii.	STORAGE	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
iv.	DISPOSAL	Dispose of contents/containers in accordance with all local, state, provincial, and federal regulations.

#### **2.3 ADDITIONAL INFORMATION**

- 2.3a HNOC HAZARDS NOT OTHERWISE CLASSIFIED Not applicable
- 2.3b UNKNOWN ACUTE TOXICITY

57% of the mixture consists of ingredient(s) of unknown acute toxicity.

#### 2.3c WHMIS CLASSIFICATION

Class D2B – Skin/Eye Irritant Class D2A – Chronic Toxic Effects Class D2A - Carcinogenicity

#### 2.3d LABEL ELEMENTS ACCORDING TO WHMIS

i. WHMIS HAZARD SYMBOLS



#### ii. WHMIS SIGNAL WORD WARNING!

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### **3.1 MIXTURES**

Chemical Name	CAS Number	Weight %
Crystalline Silica, Quartz	14808-60-7	30 - 60%
Portland cement	65997-15-1	15 – 40%
Calcium carbonate*	1317-65-3	10 – 30%
Coal Ash*	68131-74-8	7 – 13% <b>/</b> 10 – 30%**
Slag*	65996-69-2	7 – 13% / 10 – 30%**
Gypsum	7778-18-9	0.5 – 1.5% <mark>/</mark> 1 – 5%**

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

\*means it may be one component or a combination of the following components: Calcium Carbonate, Coal Ash, and Slag.

\*\*means that the component will fall into one of the ranges specified due to batch to batch variation.

### Section 4: FIRST-AID MEASURES

#### 4.1 DESCRIPTION OF THE FIRST-AID MEASURES

ROUTES OF EXPOSURE	DESCRIPTION
Eye Contact:	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.
Skin Contact:	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.
Inhalation:	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.
Ingestion:	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.

#### 4.2 MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED

ROUTES OF EXPOSURE	DESCRIPTION
Eye Contact:	Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and

swelling of the conjunctiva.Skin Contact:Causes skin irritation. Handling can cause dry skin, discomfort,<br/>irritation, and dermatitis.Inhalation:May cause respiratory tract irritation. Causes damage to organs<br/>through prolonged or repeated exposure. This product contains<br/>crystalline silica. Prolonged or repeated inhalation of respirable<br/>crystalline silica from this product can cause silicosis, a serious<br/>disabling and fatal lung disease. Please see section 4.3 for further<br/>information.Ingestion:May be harmful if swallowed. Ingestion may cause discomfort<br/>and/or distress, nausea or vomiting.

### 4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Note to Physicians:	<ul> <li>The three types of silicosis include:</li> <li>Simple chronic silicosis – which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease (COPD).</li> <li>Accelerated silicosis – occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years). Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis.</li> <li>Acute silicosis – results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels.</li> </ul>	
	Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.	
Special Treatments:	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

#### 5.1 FLAMMABILITY

Flammability:

Not Flammable by WHMIS/OSHA HAZCOM2012 Criteria

#### **5.2 EXTINGUISHING MEDIA**

- **5.2a.** Suitable Extinguishing Media: Treat for surrounding material.
- 5.2b. Unsuitable Extinguishing Media: Not available.

#### 5.3 SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

**5.3a.** Products of Combustion: May include, and are not limited to: oxides of carbon and hydrogen sulfide

#### 5.3b. Explosion Data

- i. Sensitivity to Mechanical Impact: Not available.
- ii. Sensitivity to Static Discharge: Not available.

#### 5.4 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).

### Section 6: ACCIDENTAL RELEASE MEASURES

**6.1 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.

#### 6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Methods for Containment:	Recover all usable material. Pick up large pieces, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for Cleaning-Up:	Vacuum or sweep material and place in a disposal container. Dispose of unwanted material properly in accordance with all local, regional, national and international regulations.

### Section 7: HANDLING AND STORAGE

#### 7.1 PRECAUTIONS FOR SAFE HANDLING

Handling:	Use in well-ventilated areas. Wear chemical resistant gloves and eye protection. Do not mix with other chemical products. Do not get in eyes. Do not get on skin or clothing. Do not breathe fumes. Do not take internally. Good housekeeping is important to prevent accumulation of dust.	
	To prevent burial or suffocation, do not enter a confined space, such as a silo, bin, bulk truck, or other storage container or vessel that stores or contains this product.	
General Hygiene Advice:	Use good industrial hygiene practices and wear recommended personal protection. Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.	

#### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage:Keep out of the reach of children. Keep container tightly closed.<br/>Store at room temperature and keep containers closed when not in<br/>use. Avoid any dust buildup by frequent cleaning and suitable<br/>construction of the storage area. Keep dry until use.

### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 CONTROL PARAMETERS

#### **Exposure Guidelines**

Occupational Exposure Limits		
Chemical Name	OSHA-PEL	ACGIH-TLV
Crystalline Silica, Quartz	0.1 mg/m <sup>3</sup>	0.025 mg/m <sup>3</sup>
Portland cement	5 mg/m³ (Resp.) 15 mg/m³ (Total)	10 mg/m³ (Resp.)
Calcium carbonate	5 mg/m³ (Resp.) 15 mg/m³ (Total	2 mg/m³ (Resp.)
Coal Ash	Not available	Not available
Slag	Not available	Not available
Gypsum	5 mg/m³ (Resp.) 15 mg/m³ (Total	0.025 mg/m³

#### 8.2 EXPOSURE CONTROLS

**Engineering Controls:** 

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

#### 8.3 INDIVIDUAL PROTECTION MEASURES

#### 8.3a. Personal Protective Equipment:

- i. **Eye/Face Protection:** Wear approved eye [properly fitted dust- or splash-proof chemical safety goggles/face (face shield)] protection
- ii. Skin Protection:
  - 1. Hand Protection: Wear chemical resistant gloves.
  - 2. Body Protection: Wear suitable protective clothing
- iii. 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).
- iv. General Health and Safety Measures: Handle according to established industrial hygiene and safety practices.

Appearance (physical state, color, etc.):	Solid Powder
Odor:	Characteristic
Odor Threshold:	Not available
pH:	10 – 13 when wet
Melting point/Freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash point:	> 212°F
Evaporation rate (Water=1):	Not available
Flammability:	Not flammable
Upper Flammability/Explosive Limit:	Not available
Lower Flammability/Explosive Limit:	Not available
Vapor Pressure	Not available
Vapor Density:	Not available
Relative Density:	Not available
Solubility in Water:	Slightly Soluble
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition Temperature:	Not available
Viscosity (cps):	Not available
VOC Content:	0 g/L (0%)

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Section 10: STABILITY AND REACTIVITY

#### **10.1. REACTIVITY**

No dangerous reaction known under conditions of normal use.

#### **10.2. CHEMICAL STABILITY**

Stable under normal storage conditions. Keep dry in storage.

#### **10.3. POSSIBILITY OF HAZARDOUS REACTION**

Reacts with water to form alkaline solution (condition of normal use)

#### **10.4. CONDITIONS TO AVOID**

Heat. Incompatible materials.

#### **10.5. INCOMPATIBLE MATERIALS** None known.

#### **10.6. HAZARDOUS DECOMPOSITION PRODUCTS**

Upon decomposition, this product may yield oxides of carbon and hydrogen sulfide.

#### Section 11: TOXICOLOGICAL INFORMATION

## 11.1. LIKELY ROUTES OF EXPOSURE:

Skin contact, skin absorption, eye contact, inhalation, and ingestion.

#### 11.2. SYMPTOMS RELATED TO PHYSICAL/CHEMICAL/TOXICOLOGICAL CHARACTERISTICS:

Eye Contact:	Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Skin Contact:	Causes skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis.
Inhalation:	May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a serious disabling and fatal lung disease. Please see section 4.3 for further information.

**Ingestion:** May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

Acute Toxicity			
Chemical Name	LC50	LD50	
Crystalline Silica, Quartz	Not available	Not available	
Portland cement	Not available	Not available	
Calcium carbonate	Not available	Oral: 6450 mg/kg (essentially not toxic)	
Coal Ash	Not available	Not available	
Slag	Dusts/Mists: > 5,235 mg/m <sup>3</sup>	Dermal: > 4,000 mg/kg	
Gypsum	Not available	Not available	

Chemical Name	Chemical Listed as Carcinogens or Potential Carcinogen

Page 8 of 13

	(NTP,IARC,OSHA,ACGIH,CP65)*
Crystalline Silica, Quartz	N-A2, I-1, O-1, CP65
Portland cement	Not Listed
Calcium carbonate	Not Listed
Coal Ash	Not Listed
Slag	Not Listed
Gypsum	Not Listed

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

SHORT-TERM	
Skin Corrosion/Irritation:	Causes skin irritation
Serious Eye Damage/Irritation:	Causes severe eye damage
Respiratory Sensitization:	Not available
Skin Sensitization:	Not available
STOT-Single Exposure:	May cause respiratory irritation
Aspiration Hazard:	Not available
LONG-TERM	
Carcinogenicity:	May cause cancer
Germ Cell Mutagenicity:	Not available
Reproductive Toxicity:	Not available
STOT-Repeated Exposure:	Causes damage to organs through prolonged or
	repeated exposure
Synergistic/Antagonistic Effects:	Not available

## Section 12: ECOLOGICAL INFORMATION

#### 12.1. ECOTOXICITY

May cause long-term adverse effects to the aquatic environment. Keep from entry into sewers and waterways.

Ecotoxicity			
Chemical Name	EC50/NOEC-48 Hours	LC50/NOEC-96 Hours	
Crystalline Silica, Quartz	Not available	Not available	
Portland cement	Not available	Not available	
Calcium carbonate	Not available	Not available	
Coal Ash	LC50 > 100 mg/L Daphnia Magna	LC50: > 100 mg/L	
Slag	LC50 > 100 mg/L Daphnia Magna	LC50: > 100 mg/L	
Gypsum	Not available	Not available	

## 12.2. PERSISTENCE AND DEGRADABILITY

Not available

#### **12.3. BIOACCUMULATIVE POTENTIAL**

Not available

#### 12.4. MOBILITY IN SOIL

Not available

#### **12.5. OTHER ADVERSE EFFECTS**

Not available

### Section 13: DISPOSAL CONSIDERATIONS

#### **13.1. DISPOSAL METHOD**

Dispose of contents/containers in accordance with all local, state, provincial, and federal regulations

#### **13.2. OTHER DISPOSAL CONSIDERATIONS**

Not available

### Section 14: TRANSPORT INFORMATION

DOT (U.S.)	TDG (CANADA)	
UN NUMBER:	UN NUMBER:	
Not regulated	Not regulated	
UN PROPER SHIPPING NAME:	UN PROPER SHIPPING NAME:	
Not regulated	Not regulated	
TRANSPORT HAZARD CLASS (ES):	TRANSPORT HAZARD CLASS (ES):	
Not regulated	Not regulated	
PACKING GROUP (if applicable):	PACKING GROUP (if applicable):	
Not regulated	Not regulated	

SUMMARY: Product is not regulated under DOT/TDG and other transportation regulations.

### 14.1. ENVIRONMENTAL HAZARDS

Not available

#### 14.2. TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE Not available

### 14.3. SPECIAL PRECAUTIONS FOR USER 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

Canada: This product has been classified in accordance with the hazard criteria of the

Page 10 of 13

Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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

#### **15.2. US FEDERAL INFORMATION:**

SARA TITLE III: Section 302, Extremely Hazardous Substances, 40 CFR 355:

**SARA TITLE III: Section 311 and 312,** MSDS Requirements, 40 CFR 370 Hazard Classes: Fire Hazard; Immediate (Acute) Health Hazard; Chronic Health Hazard; Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

**SARA TITLE III: Section 313**, Toxic Chemicals Notification, 40 CFR 372: This product may be subject to SARA notification requirements if it contains Toxic Chemical Constituents above their de minimus concentrations.

#### Clean Air Act – Not available

SARA TITLE III					
CHEMICAL NAME	SECTION 302	SECTION 304	CERCLA RQ	SECTION 313	
	(EHS) TPQ (LBS) EHS RQ (LBS) (LBS) (TRI)				
Crystalline Silica, Quartz	Not Listed	Not Listed	Not Listed	Not Listed	
Portland cement	Not Listed	Not Listed	Not Listed	Not Listed	
Calcium carbonate	Not Listed	Not Listed	Not Listed	Not Listed	
Coal Ash	Not Listed	Not Listed	Not Listed	Not Listed	
Slag	Not Listed	Not Listed	Not Listed	Not Listed	
Gypsum	Not Listed	Not Listed	Not Listed	Not Listed	

#### 15.3. US STATE RIGHT TO KNOW LAWS:

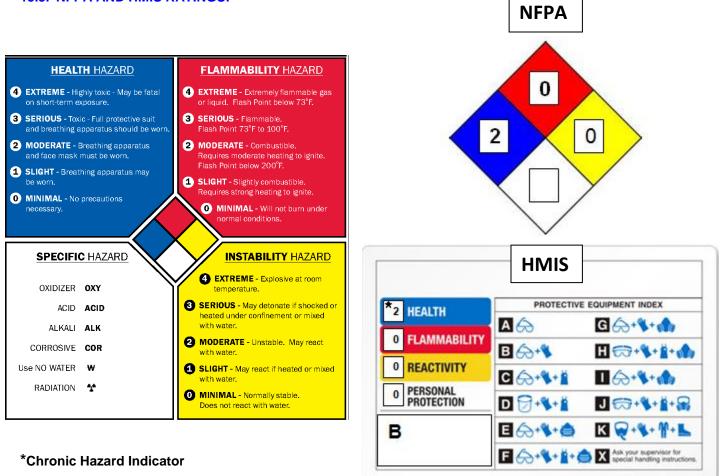
California Proposition 65:	<b>WARNING!</b> This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm (Crystalline Silica)
Other U.S. States "Right to Know" Lists:	
	SILICA, QUARTZ: CAS#14808-60-7
New Jersey:	SILICATE, PORTLAND CEMENT: CAS#65997-15-1
	CALCIUM CARBONATE: CAS#1317-65-3
	GYPSUM (CALCIUM SULFATE): CAS#7778-18-9
	CALCIUM FORMATE: CAS#544-17-2
Pennsylvania:	SILICA, QUARTZ: CAS#14808-60-7
	CEMENT, PORTLAND, CHEMICALS: CAS#65997-15-1
	LIMESTONE: CAS#1317-65-3
	GYPSUM (CALCIUM SULFATE): CAS#7778-18-9
	CALCIUM FORMATE: CAS#544-17-2
Massachusetts:	QUARTZ: CAS#14808-60-7
	PORTLAND CEMENT: CAS#65997-15-1
	CALCIUM CARBONATE: CAS#1317-65-3

	GYPSUM (CALCIUM SULFATE): CAS#7778-18-9
Minnesota:	SILICA, QUARTZ: CAS#14808-60-7
	PORTLAND CEMENT: CAS#65997-15-1
	CALCIUM CARBONATE: CAS#1317-65-3
	GYPSUM (CALCIUM SULFATE): CAS#7778-18-9
Florida:	Not Available
Michigan:	Not Available

#### **15.4. GLOBAL INVENTORIES**

Chemical Name	USA TSCA	Canada DSL/NDSL
Crystalline Silica, Quartz	Yes	DSL
Portland cement	Yes	DSL
Calcium carbonate	Yes	DSL
Coal Ash	Yes	DSL
Slag	Yes	DSL
Gypsum	Yes	DSL





#### 15.6. 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	
	<ul> <li>A4 – Not classifiable as a human carcinogen</li> </ul>	
	<ul> <li>A5 – Not suspected a human carcinogen</li> </ul>	
IARC (I)	International Agency for Research on Cancer	
	<ul> <li>1 – The agent (mixture) is carcinogenic to humans</li> </ul>	
	<ul> <li>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.</li> <li>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.</li> <li>3 – The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.</li> <li>4 – The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.</li> </ul>	
NTP (N)	National Toxicology Program	
	<ul> <li>1 – Known to be carcinogens</li> </ul>	
	<ul> <li>2 – Reasonably anticipated to be carcinogens</li> </ul>	

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

4

Date of Preparation:	September 4, 201
Version:	2.0
Revision Date:	N/A

**Disclaimer:** 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.

#### Prepared by:

JAMO Phone: (562)-968-2980 www.jamoinc.com

## **End of Safety Data Sheet**

Page 13 of 13