


## SAFETY DATA SHEET

### Section 1, Identification

<b>Product Identifier</b>	: Superstone, Ultrastone, Toprock, Toprock X, Dreamstone Saberstone, Orthostone, Labplaster, Orthoplaster
<b>Other Common Names</b>	: Tool Stone, Die Stone, Model Stone, Plaster
<b>Manufacturer</b>	: <b>Emdin International Corporation</b> <b>15841 Business Center Drive</b> <b>Irwindale, California, USA 91706</b> <b>Telephone Number 1-626-813-3740</b> <b>Emergency Number 1-626-404-2723</b> <b>Monday - Friday, 8:00 A.M. – 4:00 P.M.</b>
<b>Recommended Use</b>	: Dental articulation, models, and dies. Temporary tubing jigs, holding bushings. Mold material when casting for duplicate master hole locators. Original master models, tooling & patterns. Holding templates and surface splining. Pot & sandwich pours, leveling, shims & pads, jig & fixtures. Holding irregular pieces in machining operations.
<b>Restrictions on Use</b>	: Professional Applications Only

### Section 2, Hazard(s) identification

<b>Hazard Classification</b>	Carcinogenicity Category 1A Specific Target Organ Toxicity, Repeated Exposure Category 1
<b>Signal Word</b>	<b>Danger</b>
<b>Hazard Statement(s)</b> <i>Physical</i>	Not Classified.
<i>Health</i>	<b>H350</b> May cause cancer. <b>H372</b> Causes damage to organs through prolonged or repeated exposure.
Pictograms	
<b>Precautionary Statement(s)</b> <i>General</i>	<b>P102</b> Keep out of reach of children.
<i>Prevention</i>	<b>P201</b> Obtain special instructions before use. <b>P202</b> Do not handle until all safety precautions have been read and understood. <b>P260</b> Do not breathe dust/fume/gas/mist/vapors/spray. <b>P264</b> Wash hands thoroughly after handling. <b>P270</b> Do not eat, drink or smoke when using this product. <b>P280</b> Wear protective gloves/protective clothing/eye protection/face protection.

<i>Response</i>	<b>P308 + P313</b> IF exposed or concerned: Get medical attention. <b>P314</b> Get Medical advice/attention if you feel unwell.
<i>Storage</i>	<b>P405</b> Store locked up.
<i>Disposal</i>	<b>P501</b> Dispose of contents/container in accordance with local/regional/national/international regulation.
<b>Hazard(s) Not Otherwise Classified (HNOC)</b>	May cause mechanical irritation of the eyes, skin, nose and throat. Repeated exposure may cause skin dryness or cracking.

### Section 3, Composition/information on ingredients

Chemical Identity	Common Name	CAS Number	WT%
Calcium Sulfate, Hemihydrate	Plaster of Paris	26499-65-0	80 – 100
Crystalline Silica, Quartz	Silicon Dioxide	14808-60-7	1 – 5
Calcium Sulfate, Dihydrate	Gypsum	13397-24-5	0.1 – 1

*There are no additional ingredients present which, within the current knowledge of the manufacturer and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.*

*Exact percentage of composition has been withheld due to batch-to-batch variation and because the SDS is used for a group of substantially similar mixtures.*

### Section 4, First-aid measures

#### Description of Necessary First-Aid Measures

<i>Inhalation</i>	No special measures required. If inhaled, remove to fresh air. Get medical attention if adverse health effects persist or are severe.
<i>Skin Contact</i>	No special measures required. In case of contact, flush contaminated skin with plenty of water. Get medical attention if adverse health effects persist or are severe.
<i>Eye Contact</i>	No special measures are required. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if adverse health effects persist or are severe.
<i>Ingestion</i>	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Get medical attention if adverse health effects persist or are severe. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

#### Most Important Symptoms/Effects, Acute and Delayed

<i>Inhalation</i>	
<i>Acute (immediate)</i>	May cause mild mechanical irritation of nose, throat and respiratory system Symptoms include sneezing, coughing and/or shortness of breath.
<i>Chronic (delayed)</i>	Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include coughing and/or shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.
<i>Skin Contact</i>	
<i>Acute (immediate)</i>	May cause mild mechanical irritation of skin. Symptoms include itchiness.

<p><i>Chronic (delayed)</i></p> <p><b>Eye Contact</b></p> <p><i>Acute (immediate)</i></p> <p><i>Chronic (delayed)</i></p> <p><b>Ingestion</b></p> <p><i>Acute (immediate)</i></p> <p><i>Chronic (delayed)</i></p> <p><b>Indication of Any Immediate Medical Attention and Special Treatment Needed</b></p> <p><i>Notes to Physician</i></p>	<p>Excessive skin contact may cause skin dryness. Symptoms include inflammation, scaling, itchiness, and cracked skin.</p> <p>May cause mild mechanical irritation of eyes. Symptoms include pain, a gritty feeling in the eye, tearing, and/or redness.</p> <p>Excessive eye contact may cause corneal abrasion. Symptoms include pain, a gritty feeling in the eye, tearing, redness, sensitivity to light, headache, and/or blurred / double vision.</p> <p>No known adverse effects expected from normal, incidental ingestion.</p> <p>Excessive ingestion may cause gastrointestinal blockage. Symptoms include cramping and belly pain that comes and goes, vomiting, bloating, a hard belly, and/or constipation.</p> <p>All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.</p>
<b>Section 5, Fire-fighting measures</b>	
<b>Suitable Extinguishing Media</b>	Use an extinguishing media appropriate for the surrounding materials.
<b>Specific Hazards Arising From the Chemical</b>	Produces oxides of calcium and sulfur on thermal decomposition. May solidify with use of water spray.
<b>Special Protective Actions for Firefighters</b>	Wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode. Use standard firefighting procedures and consider the hazards of other involved materials. Cool material exposed to heat with water spray and remove if no risk is involved.
<b>Section 6, Accidental release measures</b>	
<b>Personal Precautions, Protective Equipment, and Emergency Procedures</b>	Avoid generating airborne dust during clean-up. See Section 8 of the SDS for Personal Protective Equipment. No specific emergency precautions.
<b>Environmental Precautions</b>	Keep away from drains, surface and ground water. Report releases as required by local and national authorities.
<b>Methods and Materials for Containment and Cleaning Up</b>	Vacuum spilled material using vacuums equipped with HEPA filters. Collect in labeled containers and seal securely.
<b>Section 7, Handling and storage</b>	
<b>Precautions for Safe Handling</b>	Minimize dust production when mixing, or opening and closing bags. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Observe good industrial hygiene practices. Use appropriate lifting techniques.
<b>Conditions for Safe Storage, Including Any Incompatibilities</b>	Store locked up. Store away from incompatible substances or mixtures. (Acids. Oxidizing agents. Hydrofluoric acid.)

## Section 8, Exposure controls/personal protection

### Control Parameters

Chemical Identity	OSHA (PEL)	ACGIH (TLV)	NIOSH (REL)
Calcium Sulfate, Hemihydrate	5 mg/m <sup>3</sup> (respirable) 15 mg/m <sup>3</sup> (total)	10 mg/m <sup>3</sup> (total)	5 mg/m <sup>3</sup> (respirable) 10 mg/m <sup>3</sup> (total)
Crystalline Silica, Quartz	$\frac{10 \text{ mg/m}^3}{\% \text{SiO}_2 + 2}$ (respirable) $\frac{30 \text{ mg/m}^3}{\% \text{SiO}_2 + 2}$ (total)	0.025 mg/m <sup>3</sup> (resp.) None listed.	0.05 mg/m <sup>3</sup> (resp.) None listed.
Calcium Sulfate, Dihydrate	5 mg/m <sup>3</sup> (respirable) 15 mg/m <sup>3</sup> (total)	10 mg/m <sup>3</sup> (total)	5 mg/m <sup>3</sup> (respirable) 10 mg/m <sup>3</sup> (total)

If crystalline silica (quartz) is heated to more than 870°C, quartz can change to a form of crystalline silica known as tridymite; if crystalline silica (quartz) is heated to more than 1470°C, quartz can change to a form of crystalline silica known as cristobalite. The OSHA PEL for crystalline silica as tridymite or cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

### Appropriate Engineering Controls

Use local exhaust ventilation to maintain air concentrations below occupational exposure standards.

### Individual Protection Measures, Such as Personal Protective Equipment (PPE)

#### Eye/Face Protection

Safety glasses with side shields or goggles are recommended.

#### Skin/Body Protection

For prolonged or repeated skin contact use suitable protective gloves. Long sleeved shirts and pants are recommended for workers suffering from dermatitis or sensitive skin.

#### Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

#### Thermal Hazards

None.

## Section 9, Physical and chemical properties

### Appearance

#### Physical State

Solid.

#### Form

Powder.

#### Color

Varies.

#### Odor

Low to no odor.

#### Odor Threshold

Not applicable.

#### pH

6 – 8

#### Melting Point / Freezing Point

Not applicable.

#### Initial Boiling Point and Boiling Range

Not applicable.

#### Flash Point

Not applicable.

#### Evaporation Rate

Not applicable.

#### Flammability (solid, gas)

Not applicable.

#### Upper/lower Flammability or Explosive Limits

##### Flammability Limit – Lower (%)

Not applicable.

##### Flammability Limit – Upper (%)

Not applicable.

##### Explosive Limit – Lower (%)

Not applicable.

<i>Explosive Limit - Upper (%)</i>	Not applicable.
<b>Vapor Density</b>	Not applicable.
<b>Relative Density</b>	2.5 – 3.5
<b>Solubility in Water</b>	0.15 - 0.4 g/100 g
<b>Partition Coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-Ignition Temperature</b>	Not applicable.
<b>Decomposition Temperature</b>	2642 °F (1450 °C)
<b>Viscosity</b>	Not applicable.
<b>Other Information</b>	
<i>Bulk Density</i>	55 - 70 lb/ft <sup>3</sup>
<i>Particle Size</i>	Varies.
<i>VOC (Weight %)</i>	0 %

## Section 10, Stability and reactivity

<b>Reactivity</b>	Not available.
<b>Chemical Stability</b>	Stable under normal conditions.
<b>Possibility of Hazardous Reactions</b>	Exposure to acids produce reactions that are vigorous and produce large amounts of heat. Contact with powerful oxidizing agents, such as fluorine, chlorine trifluoride and oxygen difluoride, may cause fires. Crystalline Silica (Quartz) will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride.
<b>Conditions to Avoid</b>	Avoid unintentional contact with water. Product hardens and produces heat
<b>Incompatible Materials</b>	Acids. Oxidizing agents. Hydrofluoric acid.
<b>Hazardous Decomposition Products</b>	Calcium oxides. Sulfur oxides.

## Section 11, Toxicological information

<b>Information on the Likely Routes of Exposure</b>	
<i>Inhalation</i>	May cause mild mechanical irritation of nose, throat and respiratory system Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis.
<i>Skin Contact</i>	May cause mild mechanical irritation of skin. Excessive skin contact may cause skin dryness.
<i>Eye Contact</i>	Direct contact with airborne particulates may cause temporary irritation. Excessive eye contact may cause corneal abrasion.
<i>Ingestion</i>	Excessive ingestion may cause gastrointestinal blockage.
<b>Symptoms Related to the Physical, Chemical and Toxicological Characteristics</b>	
<i>Inhalation</i>	Sneezing, coughing and/or shortness of breath. Coughing, shortness of breath, wheezing, and/or non-specific chest illness and reduced pulmonary function.
<i>Skin Contact</i>	Itchiness. Inflammation, scaling, itchiness, and/or cracked skin.
<i>Eye Contact</i>	Pain, a gritty feeling in the eye, tearing, and/or redness. Pain, a gritty feeling in the eye, tearing, redness, sensitivity to light, headache, and/or blurred / double vision.
<i>Ingestion</i>	Cramping and belly pain that comes and goes, vomiting, bloating, a hard belly, and/or constipation.

**Delayed and Immediate Effects and also Chronic Effects from Short- and Long-term Exposure**

<i>Acute Toxicity</i>	Not expected to be a hazard under normal conditions of intended use.
<i>Irritation</i>	Not available.
<i>Corrosion</i>	Not available.
<i>Sensitization</i>	Plaster of Paris has displayed little sensitization potential.
<i>Mutagenicity</i>	No evidence of mutagenicity found in Ames bacterial tests.
<i>Reproductive Toxicity</i>	Not expected to be a reproductive hazard.
<i>Teratogenicity</i>	Not available.
<i>Specific Target Organ Toxicity (single exposure)</i>	Not available.
<i>Specific Target Organ Toxicity (repeated exposure)</i>	Crystalline Silica, Quartz is listed as STOT-RE (Category 1). Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.
<i>Aspiration Hazard</i>	Due to the physical form of the product it is not an aspiration hazard.

**Numerical Measures of Toxicity**

Chemical	Organism	Data
Crystalline Silica, Quartz	Rat Terrestrial Rodent	LD50 Oral > 22,500 mg/kg

<b>Carcinogenicity</b>	Crystalline Silica (Quartz) (CAS 14808-60-7) <b>OSHA</b> - Not listed. <b>IARC</b> - "Carcinogenic to Humans" (Group 1). <b>NTP</b> - "Known to be a Human Carcinogen".
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**Section 12, Ecological information**

<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Chemical	Organism	Data
Calcium Sulfate, Hemihydrate	Fish (Pimephales Promelas)	LC50 (96 h) > 1970 mg/L
Crystalline Silica, Quartz	Carp Aquatic Fish	LC50 (72 h) > 10,000 mg/L
Calcium Sulfate, Dihydrate	Algae (Selenastrum Capricornutum)	ECgb50 (72 h) > 100 mg/L
	Invertebrates (Daphnia Magna)	EC50 (48 h) > 100 mg/L
	Fish (Oryzias Latipes)	LC50 (96 h) > 100 mg/L

<b>Persistence and Degradability</b>	Calcium sulfate dissolves in water forming calcium and sulfate ions.
<b>Bioaccumulative Potential</b>	None expected.
<b>Mobility in Soil</b>	Not available.
<b>Other Adverse Effects</b>	None expected.

**Section 13, Disposal considerations**

<b>Disposal Instructions</b>	Dispose of contents/container in accordance with local/regional/national/international regulation.
<b>Hazardous Waste Code</b>	Not regulated.

## Section 14, Transport information

<b>DOT</b>	Not regulated.
<b>TDG</b>	Not regulated.
<b>IATA/ICAO</b>	Not regulated.
<b>IMDG/IMO</b>	Not regulated.
<b>Special Precautions for User</b>	Transport in closed containers that are upright and secure.
<b>Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)</b>	This product is provided only in non-bulk containers.

## Section 15, Regulatory information

### US Federal Regulations

<i>Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)</i>	Not listed.
<i>Clean Air Act Section 602 Class I Substances</i>	Not listed.
<i>Clean Air Act Section 602 Class II Substances</i>	Not listed.
<i>DEA List I Chemicals (Precursor Chemicals)</i>	Not listed.
<i>DEA List II Chemicals (Essential Chemicals)</i>	Not listed.
<i>Safe Drinking Water Act (SDWA)</i>	Not listed.
<i>OSHA Specifically Regulated Substances (29 CFR 1910.1001- 1050)</i>	Not listed.
<i>CERCLA Hazardous Substance List (40 CFR 302.4)</i>	Not listed.
<i>SARA Section 302/304 (extremely hazardous substance)</i>	Not listed.
<i>SARA Section 311/312 (hazardous chemical)</i>	Crystalline Silica, Quartz (CAS 14808-60-7) Delayed (Chronic) Health Hazard
<i>SARA Section 313 (TRI reporting)</i>	Not regulated.
<b>US State Regulations</b>	
<i>Massachusetts Toxics Use Reduction Act (TURA)</i>	Crystalline Silica, Quartz (CAS 14808-60-7)
<i>New Jersey Worker and Community Right-to-Know Act</i>	Calcium Sulfate, Hemihydrate (CAS 26499-65-0) Crystalline Silica, Quartz (CAS 14808-60-7) Calcium Sulfate, Dihydrate (CAS 13397-24-5)
<i>Pennsylvania Worker and Community Right to Know Act</i>	Calcium Sulfate, Hemihydrate (CAS 26499-65-0) Crystalline Silica, Quartz (CAS 14808-60-7) Calcium Sulfate, Dihydrate (CAS 13397-24-5)

Rhode Island Right-to-Know  
Hazardous Substance List

Crystalline Silica, Quartz (CAS 14808-60-7)  
Calcium Sulfate, Dihydrate (CAS 13397-24-5)

California Proposition 65  
WARNING! This product contains  
a chemical known to the State of  
California to cause cancer.

Crystalline Silica, Quartz (CAS 14808-60-7)

## Section 16, Other information

**Issue Date**  
**Revision Date**  
**Version #**

October 19, 2015  
November 4, 2015  
08

**Consumer Warning**

When mixed with water this product can become very hot. Encasing of any body part can cause serious burns that may require surgical removal of affected tissue and/or amputation of encased body part.

**Key/legend to Abbreviations  
and Acronyms**

**ACGIH** - American Conference of Governmental Industrial Hygienists  
**ANSI** - American National Standards Institute  
**CERCLA** - Superfund or Comprehensive Environmental Response,  
Compensation, and Liability Act of 1980  
**DEA** - Drug Enforcement Administration  
**DOT** - Department of Transportation  
**IARC** - International Agency for Research on Cancer  
**IATA** - International Air Transport Association  
**IBC** - International Building Code  
**ICAO** - International Civil Aviation Organization  
**IMDG** - International Maritime Dangerous Goods  
**IMO** - International Maritime Organization  
**MARPOL 73/78** - Marine Pollution 1973/1978  
**MSHA** - Mine Safety and Health Administration  
**NIOSH** - National Institute for Occupational Safety and Health  
**NTP** - National Toxicology Program  
**OSHA** - Occupational Safety and Health Administration  
**PEL** - Permissible Exposure Limit  
**REL** - Recommended Exposure Limit  
**SARA** - Superfund Amendments and Reauthorization Act of 1986  
**SDS** - *Safety Data Sheet*  
**TGD** - Transportation of Dangerous Goods  
**TLV** - Threshold Limit Value  
**TRI** - Toxics Release Inventory  
**VOC** - Volatile Organic Compounds

**Disclaimer**

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.