

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: **MightyLite H, S, and X Products**

Chemical Name: Mixture of Synthetic Calcium Silicate Fibers

Grade(s): MightyLite H, S, and X

Manufacturer/Supplier: **Refractory Specialties, Inc. P.O. Box 189, OH U.S.A. 44672-0189**

Emergency: 1-330-938-2101 (Monday - Friday 8:00 a.m. - 5:00 p.m.)  
1-330-821-4051 330-692-3149 or 330-692-0247 (After Hours)

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>% BY WEIGHT</u>
Synthetic Calcium Silicate	1344-95-2	>90
Aluminum Silicate	1302-78-9	0 - 5
Synthetic Vitreous Fiber	6599-17-3	0 - 5
Crystalline Silica	14808-60-7	0 - 1.5

(See Section 8 "Exposure Controls / Personal Protection" for exposure guidelines)

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

WARNING! POSSIBLE CANCER HAZARD BY INHALATION. MAY CAUSE SKIN, EYE, AND RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF INHALED. HAZARD DEPENDS ON DURATION AND LEVEL OF EXPOSURE. OFF-WHITE TO WHITE ODORLESS MINERAL FIBER SHAPES. THIS MATERIAL MAY CONTAIN TRACE AMOUNTS OF CRYSTALLINE SILICA(QUARTZ). SEE SECTION 11 FOR DETAILS.

### HAZARD RATINGS

**HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS) RATINGS:**  
Health: 1\*, Flammability: 0, Reactivity: 0, Personal Protection Index: X

### POTENTIAL HEALTH EFFECTS

#### TARGET ORGANS:

Skin, eyes, and lungs.

#### INHALATION:

If inhaled in sufficient quantity, may cause respiratory tract irritation. Symptoms may include scratchiness of the nose or throat, cough or chest discomfort.

**EYE CONTACT:**

Slightly to moderately irritating. Fibers may be abrasive; prolonged contact may cause damage to the outer surface of the eye.

**SKIN CONTACT:**

Slightly to moderately irritating. Exposure may result in irritation, inflammation, rash or itching.

**INGESTION:**

If ingested in sufficient quantity, may cause gastrointestinal disturbances. Symptoms may include nausea, vomiting, or abdominal pain.

**CHRONIC EFFECTS:**

Crystalline silica is classified by the IARC as a Class 1 material, carcinogenic to humans. This finding was based on laboratory animal studies and epidemiological studies, considered sufficient for establishing carcinogenicity. Excessive exposure to crystalline silica can cause silicosis, a non cancerous lung disease.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

Pre-existing medical conditions, including dermatitis, asthma or chronic lung disease may be aggravated by exposure; individuals who are atopic (with a history of allergies) may experience greater amounts of skin and respiratory irritation.

**HAZARD CLASSIFICATION:**

Calcium Silicate fibers are not classified as a carcinogen. The IARC has listed Vitreous Fiber as Class 3, not classifiable (Monograph 81, 2002).

This product may contain small amounts of crystalline silica as a contaminant in the raw materials. The IARC lists Crystalline Silica as Class 1: Carcinogenic to Humans.

<b>4. FIRST AID MEASURES</b>
------------------------------

**FIRST AID PROCEDURES****INHALATION:**

If respiratory tract irritation occurs, relocate individual to a dust free environment. Get medical attention if irritation persists. See Section 8 for additional measures to reduce or eliminate exposure.

**EYE CONTACT:**

If eyes become irritated, flush immediately with large amounts of lukewarm water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Do not rub eyes. Get medical attention if irritation persists.

**SKIN CONTACT:**

If skin becomes irritated, remove contaminated clothing. Do not rub or scratch exposed skin. Wash area of contact thoroughly with soap and water. Using a skin cream or lotion after washing may be helpful.

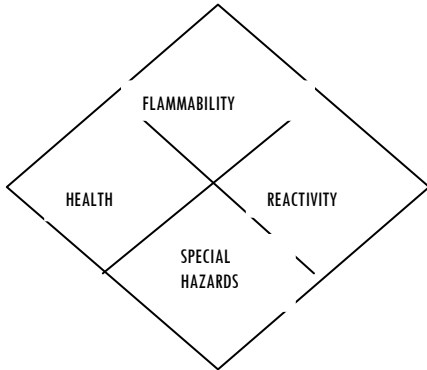
**INGESTION:**

If gastrointestinal irritation occurs, relocate individual to a dust free environment. Seek medical attention if symptoms persist.

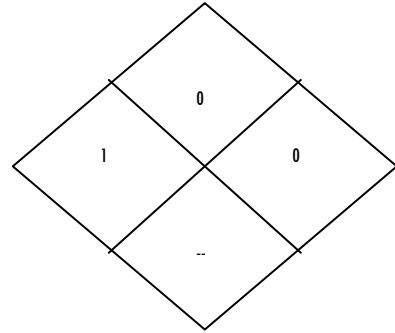
**NOTES TO PHYSICIANS:**

Skin and respiratory effects are the result of mechanical irritation; fiber exposure does not result in allergic manifestations.

**5. FIRE FIGHTING MEASURES**



4 -- EXTREME  
 3 -- HIGH  
 2 -- MODERATE  
 1 -- LIGHT  
 0 -- INSIGNIFICANT



**NFPA Unusual Hazards:** None

**Flammable Properties:**

Flashpoint: None.  
 Method: N. A.

**Flammable Limits:**

Lower Flammable Limit: N. A.  
 Upper Flammable Limit: N. A.

**Autoignition Temperature:** None.

**Hazardous Decomposition Products:**

None

**Extinguishing Media:**

Use extinguishing media suitable for type of surrounding fire.

**Fire Fighting Instructions:**

See "Extinguishing Media" above.

**Unusual Fire and Explosion Hazard:**

None.

**6. ACCIDENTAL RELEASE MEASURES**

In this product's new condition it is not listed as a hazardous waste. Check with local authorities for specific regulations, particularly after use. New product may be cleaned up and contained using HEPA vacuum and damp clean up. Avoid creating dust.

**7. HANDLING AND STORAGE**

**SPILL PROCEDURES**

Use vacuum suction with HEPA filters to clean up spilled material. Use wet sweeping or a dust suppressant where sweeping is necessary.

**HANDLING AND STORAGE**

Minimize airborne dusts by avoiding the unnecessary disturbance of materials. Good housekeeping practices should be used to minimize dust generation. Store material in a dry place and protect from the elements.

**Clean Up**

Dust suppressing cleaning methods such as wet sweeping or vacuuming should be used to clean the work area. If vacuuming is used the vacuum must be equipped with a HEPA filter. Compressed air or dry sweeping should not be used

for cleaning. Dust suppressing compounds may be used to clean up light dust. For additional information regarding the use and handling of refractory ceramic fiber, contact Refractory Specialties, Inc. at 1-330-938-2101.

#### EMPTY CONTAINERS

Product packaging may contain residue. Do not reuse.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### EXPOSURE GUIDELINES

<u>Components</u>	<u>OSHA (PEL)</u>	<u>ACGIH (TLV)</u>	<u>SUPPLIER</u>
Synthetic Calcium Silicate	5 mg/m <sup>3</sup> PEL (resp. dust) 15 mg/m <sup>3</sup> PEL (total dust)	10 mg/m <sup>3</sup> PEL (total dust)	None Established
Aluminum Silicate	5 mg/m <sup>3</sup> PEL (resp. dust) 15 mg/m <sup>3</sup> PEL (total dust)	10 mg/m <sup>3</sup> TLV (total dust)	None Established
Synthetic Vitreous Fiber	5 mg/m <sup>3</sup> PEL (resp. dust) 15 mg/m <sup>3</sup> PEL (total dust)	5 mg/m <sup>3</sup> TLV (total dust)	None Established
Crystalline Silica	0.1 mg/m <sup>3</sup> PEL (resp. dust)	0.05 mg/m <sup>3</sup> TLV (Resp dust)	None Established

#### ENGINEERING CONTROLS

Dust suppressing control technologies such as local exhaust ventilation, point of generation dust collection, down draft work stations, emission controlling tool designs, and materials handling equipment are effective means of minimizing airborne fiber emissions. For additional information, contact Refractory Specialties, Inc. at 1-330-938-2101.

#### PERSONAL PROTECTION EQUIPMENT

##### RESPIRATORY PROTECTION:

When engineering and/or administrative controls are insufficient, the use of appropriate respiratory protection, pursuant to the requirements of OSHA 1910.134 AND 29 CFR 1926.103, is recommended. The evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case by case basis, by a qualified Industrial Hygienist.

##### SKIN PROTECTION:

Wear gloves, head coverings and full body clothing as necessary to prevent skin irritation. Washable or disposable clothing may be used. If possible, do not take unwashed clothing home. Work clothes should be washed separately from other clothing and the washing machine rinsed thoroughly following use. Inform the launderer of the proper procedures. Store work clothes and street clothes separately to prevent contamination.

##### EYE PROTECTION:

Wear safety glasses or chemical goggles to prevent eye contact. Do not wear contact lenses unless chemical goggles are also worn. Do not touch eyes with contaminated body parts or materials. Have eye-washing facilities readily available where eye contact can occur.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Odor and Appearance: White or off-white, odorless ceramic shape.  
Boiling Point: N. A.  
Melting Point: 2200F minimum  
Vapor Pressure: N. A.  
Vapor Density (Air = 1): N. A.  
Molecular Weight: N. A.

Chemical Family: Synthetic calcium-silicate fibers  
% Solubility in Water: N. A.  
Specific Gravity: 0.24 – 0.27  
pH: N. A.  
% Volatile: N. A.  
Molecular Formula: N. A.

## 10. STABILITY AND REACTIVITY

<b>CHEMICAL STABILITY:</b>	Stable under conditions of normal use.
<b>CONDITIONS TO AVOID:</b>	None.
<b>HAZARDOUS DECOMPOSITION:</b>	None
<b>HAZARDOUS POLYMERIZATION:</b>	Not Applicable.

## 11. TOXICOLOGICAL INFORMATION

Primary acute health effects of this material result from mechanical abrasion of the eyes and skin, and skin dryness as a result of contact from the dust and fibers of the material.

Calcium Silicate and Synthetic Vitreous Fibers are listed by ACGIH as A4: not classifiable as a human carcinogen. AIRC classifies Synthetic Vitreous Fibers as Class 3: Not Classifiable (Monograph 81, 2002)

Crystalline Silica is listed by the IARC as Class 1: carcinogenic to humans.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicological Information:

No data available.

### Distribution:

No data available.

### Chemical Fate Information:

No data available.

## 13. DISPOSAL CONSIDERATIONS

### DISPOSAL

This material is not classified as a hazardous waste according to Federal regulations (40 CFR 261). Check local, regional, state or provincial regulations for applicable requirements for disposal. Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a "hazardous" waste.

**EMPTY CONTAINERS:** Product packaging may contain product residue. Do not reuse.

## 14. TRANSPORT INFORMATION

### U.S. DEPARTMENT OF TRANSPORTATION (DOT)

**BILL OF LADING DESCRIPTION (49 CFR 172.202):** MIGHTYLITE PRODUCTS (NON-REGULATED)

**UNITED NATIONS (UN) NUMBER:** NOT APPLICABLE

**NORTH AMERICA (NA) NUMBER:** NOT APPLICABLE

## 15. REGULATORY INFORMATION

**Key statutory and regulatory classifications or listings for the product, as manufactured, which may impact product storage, use, handling or disposal:**

**U.S. FEDERAL REGULATIONS**

**Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA)**

Constituents regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA 40 CFR 302):

NONE

**Clean Air Act (CAA)**

Substances regulated as hazardous air pollutants under Section 112 of the Clean Air Act Amendments of 1990:

NONE

**Toxic Substances Control Act (TSCA)**

No information available on this product.

**Superfund Amendments and Reauthorization Act (SARA) Title III Information: SARA Hazard Category**

Listed below are the hazard categories for the Superfund Amendments and Reauthorization Act (SARA) Section 311/312 (40 CFR 370):

Immediate Hazard: -- Fire Hazard: -- Reactivity Hazard: -- Delayed Hazard: X Pressure Hazard: --

**SARA 313 Information**

Toxic chemical(s) subject to the annual reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313 (40 CFR 372)"

NONE

**SARA 302/311/312 Information**

Extremely hazardous substances subject to the notification and inventory reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 302 (40 CFR 355) and Section 311/312 (40 CFR 370) respectively:

NONE

**STATE REGULATIONS**

**California:**

Substance(s) listed by the State of California on Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986: Warning! This product contains a chemical known to the state of California to cause cancer.

**INTERNATIONAL REGULATIONS**

**Canadian Workplace Hazardous Materials Information System (WHMIS):**

The following Canadian Workplace Hazardous Materials Information System (WHMIS) categories apply to this product:

D2B – Irritant

Component Analysis

Crystalline Silica (14808-60-7) D2A – Very toxic material causing other toxic effects

**16. OTHER INFORMATION**

**Definitions:**

**ACGIH:** American Conference of Governmental Industrial Hygienists

**CAS:** Chemical Abstracts Service

**EPA:** Environmental Protection Agency

**Fibers/cc:** Fibers per cubic centimeter

**HEPA:** High Efficiency Particulate Air

**HMIS:** Hazardous Materials Information System  
**mg/m<sup>3</sup>:** Milligrams per cubic meter of air  
**NFPA:** National Fire Protection Association  
**NIOSH:** National Institute for Occupational Safety and Health  
**OSHA:** Occupational Safety and Health Administration  
**29 CFR 1910.134 & 1926.103:** OSHA Respiratory Protection Standard  
**29 CFR 1910.1200 & 1926.59:** OSHA Hazard Communication Standard  
**PEL:** Permissible Exposure Limit  
**RCRA:** Resource Conservation and Recovery Act  
**SARA:** Superfund Amendments and Reauthorization Act  
**Title III:** Emergency Planning and Community Right to Know Act  
**Section 302:** Extremely Hazardous Substances  
**Section 304:** Emergency Release  
**Section 311:** MSDS/List of Chemicals and Hazardous Inventory  
**Section 312:** Emergency and Hazardous Inventory  
**Section 313:** Toxic Chemicals and Release Reporting  
**SVF:** Synthetic Vitreous Fiber  
**TLV:** Threshold Limit Value (ACGIH)  
**TSCA:** Toxic Substances Control Act

**DISCLAIMER**

The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.