

## MATERIAL SAFETY DATA SHEET

### **IDENTITY**

Product Name: Calcium Silicate Board

Grade: All Grade (FCS-17, FCS-23, FCS-25, FCS-27, FCS-50, FCS-80C, FCS-85G)

Product Use: Industrial heat processing and fire protection

### **SUPPLIER**

Company:

Tel:

Fax:

### **COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No.	Con c. (%)	ACGIH-TLV	OSHA-PEL
Calcium silicate	1344-95-2	55 – 75	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Calcium metasilicate (wollastonite)	13983-17-0	20 – 40	3 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Natural organic fibers	65996-61-4	0 – 5	None	None
Crystalline silica (quartz)	14808-60-7	0.1 – 1	0.025 3	10 mg/m <sup>3</sup> /(%SiO <sub>2</sub> +2)

Notes: (1) TLV and PEL values are 8-hour time-weighted averages for respirable dust, unless otherwise specified.

(2) \*

= total dust

### **PHYSICAL AND CHEMICAL PROPERTIES**

Physical Form: Solid sheets. White to Gray. No characteristic

odor. Odor Threshold: N/A Boiling Point N/A

Melting Point: > 2300°F (1260°C)

Specific Gravity: approx.. 1.6

pH: N/A

Solubility in Water : Insoluble

Evaporation Rate: N/A

### **FIRE-FIGHTING MEASURES**

**Extinguishing Method:** Dry chemical, carbon dioxide (CO<sub>2</sub>), water fog, or foam.

**Fire and explosion Hazards:** This product is non-flammable and does not pose a significant fire or explosion hazard.

**Special Fire-fighting Procedures:** No special firefighting equipment is necessary.

**Hazardous Products of Combustion:** During initial exposure to service temperatures, smoke may be limited which can cause transitory irritation to the lungs and upper respiratory system.

#### **STABILITY AND REACTIVITY INFORMATION**

**Stability:** Product is stable under normal conditions.

**Incompatibilities:** Crystalline silica (quartz) is incompatible with hydrofluoric acid, fluorine, chloride trifluoride and oxygen difluoride.

**Conditions to avoid:** Avoid strong acids and ammonium salts. Contact with powerful oxidizing agents (i.e. fluorine, chlorine trifluoride) may present a fire hazard.

**Hazardous polymerization:** Will not occur.

**Hazardous Products of Decomposition:** Crystalline silica will dissolve in hydrofluoric acid and product silicon tetrafluoride, a corrosive gas.

#### **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering Controls:** Maintain sufficient mechanical or natural ventilation to assure dust concentrations remain below the established PEL/TLV. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices.

**Respiratory protection:** Wear a dust mask (i.e., 3M 8511 N-95 or equivalent) to limit exposure to product dust. Respiratory selection should be based on the level of exposure as measured by dust sampling. Concentrations that exceed the recommended dust mask limits may require a higher level of protection, such as a half-mask respirator with appropriate dust filters.

**Eye protection:** Wear safety glasses with side shields, goggles or face shield when cutting, milling or abrading to protect eyes against dust and airborne particulates.

**Skin protection:** Under normal conditions, protective gloves and a clean body covering are sufficient. Direct skin contact with dust and debris can be further minimized by wearing long-sleeved shirts and long trousers.

#### **ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** If dusty conditions exist (i.e. during cutting, sanding or milling), wear a dust mask.

**Environmental Precautions:** Environmental precautions are not normally required. This product does not pose a significant threat to the environment.

**Clean-Up Procedures:** Before clean-up, wet down dust and debris with a fine water spray to suppress airborne particulates. Pick up, shovel or sweep material into an approved waste disposal container. Use equipment fitted with a high-efficiency particulate filter to vacuum clean dust.

#### **DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** May be disposed in an approved landfill in accordance with local regulations. If this product has become contaminated in service, place in an approved hazardous waste container. Seal and properly label the container, and send to a Transportation, Storage and Disposal facility via an approved waste hauler.

## HAZARDS IDENTIFICATION

**Emergency Overview:** This product contains crystalline silica, a chronic health hazard by inhalation. Prolonged exposure may cause permanent and irreversible lung damage, including silicosis, and increase the risk of lung cancer, kidney and liver damage. Silicosis is a rapidly progressive, non-cancerous lung disease that is often fatal. Symptoms include shortness of breath, cough, fever, weight-loss and chest pain.

Cigarette smoking may increase the risk of silicosis, bronchitis, pneumoconiosis, and lung cancer in persons also exposed to crystalline silica.

**Hazard Category:** Acute (Immediate) Health Hazard; Chronic (Delayed) Health Hazard

**Routes of Entry:** Lungs and respiratory system via respirable dust (inhalation), and eyes via coarse dust and particles.

**Target Organs:** Lungs, respiratory system, and eyes.

### **Signs and Symptoms of Overexposure:**

**Inhalation:** Respirable airborne particle may cause transitory irritation to the lungs and upper respiratory system. Symptoms of overexposure may include shortness of breath, coughing and chest pain.

**Skin Contact:** Long-term exposure to product dust may cause dryness and/or irritation. **Eye Contact:** Product dust is a mechanical irritant which may cause moderate to severe eye irritation and dryness.

**Ingestion:** Non-hazardous when ingested. May cause mild irritation to the gastro-intestinal (GI) tract and mouth if excessive quantities are ingested.

**Medical Conditions Aggravated by Exposure:** Medical conditions which may be aggravated by exposure to this product include dry skin and/or dermatitis, and pre-existing chronic upper respiratory and lung disease such as bronchitis, emphysema and asthma.

**Carcinogenicity:** Crystalline silica, inhaled in the form of quartz and/or cristobalite, has been classified by the International Agency for Research on Cancer (IARC) as a Group 1 – known human carcinogen.

## FIRST AID MEASURES

**Inhalation:** Remove to fresh air. Drink water to clear throat and blow nose to evacuate remaining dust. If coughing and irritation develop, seek medical attention.

**Eye Contact:** Flush with large amounts of water until irritation subsides, as least 15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** Normal good personal hygiene practices. Wash with mild soap and warm water after each exposure.

**Ingestion:** Emergency first-aid procedures are not normally required following ingestion. However, this product may cause temporary irritation to the gastro-intestinal (GI) tract and mouth if excessive quantities are ingested.

## HANDLING AND STORAGE

**Storage Requirements:** Store in a cool, dry, well ventilated area away from food and beverages. Keep away from reactive materials and always separate materials by hazard class.

**Handling Precautions:** Calcium silicate boards do not present a hazard in their intact state. Assure proper respiratory protection during cutting, milling or sanding, or if the dust potential exceeds the established TLV/PEL.

#### **TOXICOLOGICALE / ECOLOGICAL INFORMATION**

### **Toxicological Hazards:**

**Wollastonite:** Studies of wollastonite mill and mine workers suggest that long-term cumulative exposure to wollastonite dust may cause decreased pulmonary function and/or mild industrial bronchitis, particularly in workers who smoke.

**Crystalline silica will:** Long-term overexposure to respirable crystalline silica may cause permanent and irreversible lung damage, including silicosis, and increase the risk of lung cancer, kidney and liver damage. Silicosis is a rapidly progressive, non-cancerous lung disease that is often fatal.

**Teratogenic Effects:** No additional information is available.

**Mutagenic Effects:** No additional information is available.

**Ecotoxicity:** Most ingredients in this product are naturally occurring minerals and, unless contaminated in service, are not hazardous to the environment.

**Products of Biodegradation:** No additional information is available.

#### **ADDITIONAL INFORMATION**

The information, details, dimensions and values indicated are to our best knowledge. We recommend testing according to local conditions. The specifications are subject to change without notice.