

GLENDO LLC

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

MATERIAL NAME: SOLDERING BOARD

TRADE NAME: Soldering Board
PART NUMBERS: 004-129, 004-179, 004-592, 004-373, 004-545, 004-570,
004-588, 004-130, 004-569
DISTRIBUTOR'S NAME: Glendo LLC
ADDRESS: 900 Overlander Road, Emporia, KS 66801
PHONE: (620) 343-1084

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	COMMON NAME	CONCENTRATION (%)	CAS #	OSHA PEL	ACGIH-TLV
CALCIUM SILICATE	N/A	55 – 75	1344-95-2	5 mg/m ³	10 mg/m ³
CALCIUM METASILICATE	WOLLASTONITE	20 – 40	13983-17-0	5 mg/m ³	3 mg/m ³
NATURAL ORGANIC FIBERS	N/A	0 – 5	65996-61-4	NONE	NONE
CRYSTALLINE SILICA	QUARTZ	0.1 – 1	14808-60-7	10 mg/m ³ / (%SiO ₂ +2)	0.025 mg/m ³

NOTES: (1) tlv and pel values are 8-hour time-weighted averages for respirable dust, unless otherwise specified.
 (2) * = total dust

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Contains crystalline silica, a chronic health hazard by inhalation. Prolonged exposure to crystalline silica dust may cause permanent and irreversible lung damage, including silicosis, and increased 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.

Crystalline silica, inhaled in the form of quartz and/or cristobalite, has been classified as a known human carcinogen (Group 1) by the International Agency for Research on Cancer (IARC), and as a suspected human carcinogen (Group 2A) by the Association of Governmental Industrial Hygienists (ACGIH).

NFPA RATING HEALTH 1 FIRE 0 REACTIVITY 0 SPECIAL HAZARD 0
HMIS RATING HEALTH 2 FIRE 0 REACTIVITY 0 PPE CODE E

3. HAZARDS IDENTIFICATION (continued)

HAZARD CATEGORY: Acute (Immediate) Health Hazard; Chronic (Delayed) Health Hazard

ROUTES OF ENTRY: Lungs/respiratory system via respirable dust (inhalation), and eyes via coarse dust and particulates.

TARGET ORGANS: Lungs, respiratory system, and eyes.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

INHALATION: Respirable airborne particulates 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 aggravated by exposure to this product include dry skin, dermatitis, and pre-existing chronic upper respiratory and lung diseases (i.e., bronchitis, emphysema and asthma). Cigarette smoking may increase the risk of silicosis, bronchitis, pneumoconiosis and lung cancer in persons exposed to crystalline silica.

4. FIRST AID MEASURES

EYE CONTACT: Flush with large amounts of water until irritation subsides, at least 15 minutes. Seek medical attention if irritation persists.

SKIN CONTACT: Perform normal, good hygiene practices. Wash with mild soap and warm water after each exposure.

INHALATION CONTACT: Remove to fresh air. Drink plenty of water, and blow nose to evacuate remaining dust. If coughing and irritation develop seek medical attention.

INGESTION CONTACT: 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.

5. FIRE, EXPLOSION DATA AND MEASURES

AUTO-IGNITION: N/A

FLASH POINT: Non-flammable

FLAMMABLE LIMITS: LEL: N/A UEL: N/A

PRODUCTS OF COMBUSTION: During initial exposure to service temperatures, smoke may be emitted which can cause transitory irritation to the lungs and upper respiratory system.

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide (CO₂), water fog, or foam

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS: No special firefighting equipment is necessary. Use extinguishing media appropriate for the surrounding fire. Firefighters should wear protective clothing and use a self-contained breathing apparatus (SCBA).

EXPLOSION AND VAPORS: This product is non-flammable and does not pose a significant fire or explosion hazard.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: If dusty conditions exist (i.e., during cutting, sanding or milling), wear a NIOSH-approved dust mask, such as the 3M 8511 N-95 or equivalent.

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 (HEPA) filter to vacuum clean dust.

7. HANDLING AND STORAGE

HANDLING: 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. Refer to Exposure Controls and Personal Protection in Section 8 for further information.

STORAGE: 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. Refer to Stability and Reactivity in Section 10 for incompatibility information and conditions to avoid.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Maintain sufficient mechanical or natural ventilation to assure dust concentrations remain below the established TLV/PEL. Use local exhaust if necessary. Power equipment used during cutting, sanding or milling should be fitted with a properly designed dust collection device.

PERSONAL PROTECTIVE EQUIPMENT (PPE) DURING PRODUCT USE

EYE PROTECTION: Wear safety glasses with side shields, goggles or face-shield when cutting, milling or sanding to protect eyes from dust and airborne particulates. Selection and use of eye protection should comply with ANSI Z87.1-1-1989 and applicable OSHA standards.

RESPIRATORY PROTECTION: Wear a NIOSH-approved 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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: solid sheets, gray

PHYSICAL STATE: solid

ODOR: no characteristic odor

ODOR THRESHOLD: not available

SOLUBILITY: insoluble

PH: not available

BOILING POINT: not available

SPECIFIC GRAVITY: Approx 1.6 (WATER = 1)

MELTING POINT: > 2300° F (1260° C)

VAPOR DENSITY: not available

VAPOR PRESSURE: not available

% VOLATILE BY VOL. / WT.: not available

EVAPORATION RATE: not available

VISCOSITY: not available

10. STABILITY AND REACTIVITY

STABILITY: This product is stable under normal conditions of use.

INCOMPATIBILITY: Crystalline silica is incompatible with hydrofluoric acid, fluorine, chlorine 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.

10. STABILITY AND REACTIVITY (continued)

HAZARDOUS DECOMPOSITION PRODUCTS: Crystalline silica will dissolve in hydrofluoric acid and produce silicon tetrafluoride, a corrosive gas.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

11. TOXICOLOGICAL 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: 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.

CARCINOGENICITY: Crystalline silica, inhaled in the form of quartz and/or cristobalite, has been classified as a known human carcinogen (Group 1) by the International Agency for Research on Cancer (IARC), and as a suspected human carcinogen (Group 2A) by the Association of Governmental Industrial Hygienists (ACGIH).

SENSITIZATION: This product is not considered a sensitization hazard.

TERATOGENIC EFFECTS: This product is not considered a teratogenic hazard.

MUTAGENIC EFFECTS: This product is not considered a mutagenic hazard.

REPRODUCTIVE SYSTEM TOXICITY: This product is not considered hazardous. Reproductive system effects are not expected to occur.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Unless contaminated in service, this product is not considered hazardous to aquatic life.

BOD5 / COD: No additional information is available.

PRODUCTS OF BIODEGRADATION: No additional information is available.

13. DISPOSAL CONSIDERATIONS

May be disposed in an approved landfill in accordance with local, state and federal 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 (TSD) facility via an approved waste hauler.

14. TRANSPORT INFORMATION

DOMESTIC (LAND DOT)	
PROPER SHIPPING NAME:	Not a U.S. Department of Transportation (DOT) controlled substance
HAZARD CLASS:	N/A
UN/NA:	N/A
PACKING GROUP:	N/A
LABEL/PLACARD	N/A
SPECIAL PROVISIONS	This product does not require special transport provisions.

15. REGULATORY INFORMATION

TSCA INVENTORY: All ingredients are listed on the Toxic Substances Control Act (TSCA) inventory.

CALIFORNIA PROP. 65: This product contains the following substances known to the State of California to cause cancer: crystalline silica

STATE RTK LISTS: Crystalline silica (quartz), (CAS No.: 14808-60-7): MA, MN, NJ, PA, RI

CERCLA REPORTABLE QUANTITY (RQ): Does not contain any hazardous substances in excess of the CERCLA de minimis reportable quantity.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III

SECTION 302 / 304: This product does not contain any Extremely Hazardous Substances (EHS) as defined and listed under SARA Title III, Sections 302 and 304.

SECTION 311 / 312: This product meets the following EPA Hazard Categories as defined and listed under SARA Title III, Sections 311 and 312:

<u>Acute Hazard</u>	Yes
<u>Chronic Hazard</u>	Yes
<u>Fire Hazard</u>	No
<u>Reactivity Hazard</u>	No
<u>Pressure Hazard</u>	No

SECTION 313: This product does not contain any substances subject to the reporting requirements of SARA Title III, Section 313.

OTHER REGULATORY CLASSIFICATIONS

DSL (CANADA): All ingredients are listed, or exempt from inclusion, on the Canadian Domestic Substances List (DSL). WHMIS (Canada)

CLASS D-2A: Material causing other toxic effects. Very Toxic – Chronic

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

The information contained herein is based on data considered to be accurate; however, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Vendor assumes no responsibility for injury to vendee or third party persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the material safety data sheet.

Additionally, vendor assumes no responsibility for injury to vendee or third party persons proximately caused by abnormal use of this material even if reasonable safety procedures are followed.

Vendee assumes the risk in use of this material.

<u>CREATION DATE</u>	<u>CREATED BY</u>	
01/01/2007	B. Teegardin	
<u>REVISION DATE</u>	<u>REVISED BY</u>	<u>REASON FOR REVISION</u>
03/11/2013	R. Fessler	Content Review
08/12/2014	R. Fessler	Content Review