



SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Product Name: Quartz Ceramic Crucible
Synonyms: Quartz Crucible
Recommended Use: Countertop, Flooring, and Wall Application
Manufacturer Name: Stanford Advanced Materials
Address: 23661 Birtcher Dr. Lake Forest,
CA 92630 USA
Telephone: (949) 407-8904
Emergency Telephone No. (949) 407-8904

This document has been prepared in accordance with the Occupational Safety and Health Administration (OSHA) Hazard Communication standard, 29 Code of Federal Regulations (CFR) 1910.1200(g), Safety Data Sheets.

2. HAZARDS IDENTIFICATION

Quartz products are not hazardous as shipped. The products are odorless, stable, non-flammable, and pose no immediate hazard to health. Respiratory, hand and eye protection may be needed to prevent excess exposure to airborne particulates if dust is produced by cutting product during installation.

Classification of the Chemical in Accordance with Paragraph (d) of 1910.1200:

Emergency Overview: Danger! Lung Injury and Cancer Hazard

GHS Classification (Global Harmonized Standard Classification):

Carcinogenicity - Category 1A (H350)

Specific target organ toxicity, single exposure; Respiratory tract irritation - Category 3 (H335)

Specific target organ toxicity, repeated exposure - Category 1A (H372)

GHS Label, Hazards and Precautionary Statements

GHS Hazard Pictogram:

Crystalline Silica:  Category 3 (Respiratory tract irritation) (H335)



Category 1A (Carcinogenicity) (H372)

GHS Signal Word: Danger

GHS Hazard Statements:

(H350) May cause cancer (inhalation)

(H335) May cause respiratory irritation

(H372) Causes damage to organs (lung/respiratory) through prolonged or repeated exposure (inhalation)

2. HAZARDS IDENTIFICATION (CONT)

GHS Precautionary Statements:

- Do not handle until all safety precautions have been read and understood. (P202)
- Do not breathe dust/spray. (P260 + P261)
- Wash skin thoroughly after handling. (P264)
- Do not eat, drink or smoke when using this product. (P270)
- Wear protective gloves, protective clothing, eye protection, face protection. (P280)

Hazards Not Otherwise Classified:

Inhalation: Do not breathe dust. See "Potential Health Effects" in Section 11 for more details.

Unknown Acute Toxicity:

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Quartz products have been fabricated into various shapes, sizes, and colors.

Composition	CAS#	Estimated % by Wt.
Quartz/Silica Sand	CAS: 14808-60-7	0-93
Cristobalite	CAS: 14464-46-1	0-93
Aluminum Hydroxide	CAS: 21645-51-2	0-80
Glass	CAS: 99439-28-8	0-35
Polyester Resin	CAS: 113669-95-7	5-20
Pigment and Additives		0-5

4. FIRST AID MEASURES

Description of First Aid Measures:

- Eyes: Immediately flush eyes with large amounts of water for at least 15 minutes if dust gets in eyes. Get medical attention if irritation persists.
- Skin: Wash thoroughly after working with quartz products.
- Inhalation: Remove to fresh air if exposed to large amounts of dust. Administer artificial respiration if breathing has stopped. Keep victim at rest. Call for prompt medical attention.
- Ingestion: Not applicable for intact quartz products.

Most Important Symptoms/Effects, Acute and Delayed:

May cause respiratory irritation. May cause cancer. Causes damage to organs through prolonged or repeated exposure.

Indication of Immediate Medical Attention and Special Treatment Needed:

If exposed or concerned, get medical advice and attention. Have emergency eyewash station available in area where products are cut.

5. FIRE-FIGHTING MEASURES AND INFORMATION

- Suitable Extinguishing Media: ABC fire extinguisher
- Specific Hazards: Not applicable
- Special Fire Fighting Procedures: None required
- Fire and Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures:

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not handle until all safety precautions have been read and understood. Use personal protection recommended in Section 8 of this SDS.

Methods and Materials for Containment and Cleaning Up:

Avoid creating excessive dust. Clean up dust with a vacuum system with a High-efficiency particulate (HEPA) air filter vacuum or damp sweeping. See Section 8 of this SDS concerning PPE information for clean-up.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Silica dust harmful if inhaled. Exposure to silica dust from cutting, grinding, or polishing can cause acute lung injury, silicosis, or cancer. Wear a respirator when cutting, grinding, or polishing. Use wet cutting methods and do not dry cut.

Conditions for Safe Storage, Including Incompatibilities:

Do not store near acids. If quartz products contact some acids, damage/discoloration to the surface may occur. Shelf life is unlimited.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Exposure Table**

Composition	OSHA PEL	NIOSH REL	ACGIH TLV
Crystalline silica as quartz	50 $\mu\text{g}/\text{m}^3$	0.05 mg/m^3	0.025 mg/m^3

* Based on an 8hr TWA or Time Weighted Average

8.2 ENGINEERING CONTROLS/PERSONAL PROTECTION

Ventilation: Use adequate ventilation to keep exposure to dust below recommended exposure levels. Avoid inhalation of dust. The highest probability of silica exposure occurs during installation using dry cutting methods. Wet cutting methods and exposure control methods set forth in Table 1 of 29 CFR § 1926.1153 are recommended.

Respiratory Protection: Use of a properly fitted NIOSH/MSHA approved particulate respirator is recommended when cutting quartz products for installation.

Eye Protection: Use dust-proof goggles or safety glasses with side shields. Contact lenses may absorb irritants. Do not wear contact lenses in work areas.

Skin Protection: Cotton or leather work gloves should be worn when cutting this product to minimize skin exposure to dust and/or cuts. Wash hands prior to eating, drinking, or smoking, and at the end of the work shift, after cutting operations are conducted.

NOTE: Personal protection information in Section 8 is based on general information for normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the assistance of an industrial hygienist or other qualified professional be obtained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Multi-colored engineered stone
Odor:	Odorless
Odor Threshold:	Not applicable
pH:	Not applicable
Melting Point:	Not available
Freezing Point:	Not available
Boiling Point:	Not applicable
Flash point:	490°C
Evaporation Rate (Ethyl; Ether = 1):	Not applicable
Flammability:	Not applicable
Upper/Lower Flammability Limits:	Not applicable
Vapor Pressure:	Not applicable
Vapor Density (Air = 1):	Not applicable
Relative density:	Not applicable
Solubility in Water:	Insoluble
Partition Coefficient: n-octanol/water:	Not applicable
Auto-ignition Temperature:	Not applicable
Decomposition Temperature:	Not applicable
Viscosity:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity:	Not available
Chemical Stability:	Stable in normal conditions and storage conditions.
Possibility of Hazardous Reactions:	Not available
Conditions to Avoid:	Avoid contact with acids (e.g., acetic, hydrofluoric, etc.)
Incompatibility (Materials to Avoid):	Avoid contact with acids (e.g., acetic, hydrofluoric, etc.)
Hazardous Polymerization:	Will not occur.
Hazardous Decomposition Products:	None.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Primary Routes of Exposure

None for intact quartz products. Inhalation and potential exposure to eyes, hands, or other body parts if contact is made with broken product, and/or during procedures involving the cutting of products.

Acute Effects *Crystalline Silica*

No acute effects from exposure to intact quartz are known. Working with broken or cut quartz produces a potential for cuts to the hands and exposed body parts. Acute effects such as eye irritation may occur if associated with high dust operations such as dry cutting. In very rare cases, symptoms of acute silicosis, a form of silicosis (a nodular pulmonary fibrosis) associated with exposure to respirable crystalline silica, may develop following acute exposure to extremely dusty environments caused by generation of product dust. Signs such as labored breathing and early fatigue may indicate silicosis; however, these same symptoms can arise from many other causes.

Chronic Effects *Crystalline Silica*

No chronic effects are known for exposure to intact quartz products. Long-term, continual exposure to respirable crystalline silica at or above established permissible occupational exposure limits may lead to the development of silicosis, a nodular pulmonary fibrosis (NPF). NPFs are also associated with pulmonary tuberculosis, bronchitis, emphysema, and other airway diseases. This type of chronic exposure to silica dust may also result in the development of autoimmune disorders, chronic renal disease, and other adverse health effects. Recent epidemiologic studies demonstrate that workers exposed to elevated silica concentrations have a significant risk of developing chronic silicosis. Signs such as labored breathing and early fatigue may indicate silicosis; however, these same symptoms can also arise from many other causes.

Potential Adverse Interactions

Silicosis may be complicated by severe mycobacterial or fungal infections and result in tuberculosis (TB). Epidemiologic studies have established that silicosis is a risk factor for developing TB. Any existing respiratory or pulmonary diseases may be complicated by exposure to respirable crystalline silica. Smoking may increase the risk of adverse effects if done in conjunction with occupational exposure to silica dust at or above permissible exposure limits.

Carcinogen Status

Respirable crystalline silica is classified by the International Agency for Research on Cancer (IARC) as a Group I Carcinogen (carcinogenic to humans). The National Toxicology Program (9th Report) lists respirable crystalline silica as "Known to be a Human Carcinogen." USDOL/OSHA lists crystalline silica in the OSHA Hazard Communication Carcinogen list.

Acute Toxicity

Not available

Overview of Animal Testing

Short term experimental studies of rats have found that intratracheal instillation of quartz particles leads to the formation of discrete silicotic nodules in rats, mice and hamsters.

Oral (silica) Lethality

LD50 Rat oral >22,500 mg/kg LD50
 Mouse oral >15,000 mg/kg
 LC50 Carp >10,000 mg/l (per 72 hr.)

12. ECOLOGICAL INFORMATION

No information available at this time.

13. DISPOSAL CONSIDERATIONS

Waste should be disposed of in a landfill certified to accept such materials in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

D.O.T Shipping Name: Not applicable
 Hazard Class: Non-regulated (for disposal purposes material is non-hazardous Class III regulated material)
 ID Number: Not applicable
 Marking: Not applicable
 Label: None
 Placard: None
 Hazardous Substance/RQ: Not applicable
 Shipping Description: Quartz products
 Packaging References: None

15. REGULATORY INFORMATION

This product and/or its components have been previously introduced into U.S. commerce and is listed in the Toxic Substances Control Act (TSCA) Inventory of Chemicals in Commerce. Hence, it is subject to all applicable provisions and restrictions under TSCA 40 CFR Section 721 and 723.250.

Title 22 Division 2, California Code of Regulation Chapter 3 (Proposition 65): This product contains crystalline silica a chemical known to the State of California to cause cancer.

Title 8, Division 1, California Code of Regulation Chapter 4, Section 5204 (Cal-OSHA Emergency Temporary Standard for Silica): This product contains more than 0.1% crystalline silica. When performing a "high-exposure trigger task," follow Cal-OSHA's emergency temporary standard for silica. "High-exposure trigger task" includes machining, crushing, cutting, drilling, abrading, abrasive blasting, grinding, chiseling, carving, gouging, polishing, buffing, fracturing, intentional breaking, or intentional chipping of artificial stone as well as clean up, distributing, or handling of wastes, dusts, residues, debris, or other materials created during the above-listed tasks. Do not dry cut. Use one of the following wet cutting methods: (1) applying a constant, continuous, and appropriate volume of running water directly onto the surface of the stone; (2) submersing the stone underwater; or (3) water jet cutting using high pressure water to cut the stone. Wear a full face, tight-fitting powered-air purifying respirator or a respirator providing equal or greater protection equipped with a HEPA, N100, R100, or P100 filter and organic vapor cartridge. Use wet cleanup methods or vacuum cleaners equipped with a HEPA filter. Do not use compressed air on waste, dust, debris, residue, or other materials that may contain crystalline silica or on any surface or clothing or body surface that may contain crystalline silica.

State Regulations: Crystalline silica as quartz (CAS: 14808-60-7)
 Massachusetts – Right To Know List
 New Jersey – Right to Know Hazardous Substance List
 Pennsylvania – RTK (Right to Know) List

This product or its components meets the following hazard definition(s) as defined by the Occupational Safety and Health Hazard Communication Standard (29 CFR Section 1910.1200):

Combustible Liquid Flammable Aerosol Oxidizer
 Compressed Gas Explosive Pyrophoric
 Flammable Gas Health Hazard (Sections 3 & 11) Unstable
 Flammable Liquid Organic Peroxide Water Reactive
 Flammable Solid

Based on information presently available, this product does not meet any of the hazard definitions of 29 CFR Section 1910.1200.

Note: The information in this data sheet provides information related to the potential hazards associated with dusts which may be produced during cutting or otherwise changing the shape of the product during installation.

16. ADDITIONAL INFORMATION

Global Harmonization Identification System

GHIS: Health: 3 Fire: 4 Reactivity: 4

Hazardous Material Identification System

HMIS: Health: 0 Fire: 0 Reactivity: 0

National Fire Protection Association

NFPA: Health: 0 Fire: 0 Reactivity: 0

Date of Preparation: July 22, 2024