



Appearance/Odor: Quartz products are odorless and can be of any color.

Potential Health Effects: Quartz surfaces are not hazardous as shipped. However, certain hazards may arise during fabrication operations, such as cutting, grinding, and polishing, which can generate dust and airborne particulates.

Classification and Labeling:

Quartz products are classified under the Global Harmonized System (GHS) as follows:

- 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 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)

GHS Precautionary Statements:

- P202: Do not handle until all safety precautions have been read and understood.
- P260 + P261: Do not breathe dust/spray.
- P264: Wash skin thoroughly after handling.
- P270: Do not eat, drink, or smoke when using this product.

- P280: Wear protective gloves, protective clothing, eye protection, and face protection.

Potential Health Effects:

- Inhalation: Dust generated during fabrication operations may cause irritation to the respiratory tract, leading to coughing and sneezing. Avoid breathing dust.
- Eye Contact: Dust generated during fabrication operations may cause eye irritation. Wear suitable eye protection and avoid wearing contact lenses.
- Skin Contact: Dust generated from quartz products may cause skin irritation. Wear suitable protective clothing.
- Ingestion: Quartz products do not pose a health hazard through ingestion. However, swallowing dust may cause gastrointestinal irritation.
- Chronic Exposure: Prolonged exposure to crystalline silica can lead to chronic health effects such as silicosis, cancer, scleroderma, tuberculosis, and nephrotoxicity.
- Aggravation of Pre-existing Conditions: The potential aggravation of pre-existing conditions has not been determined.

Note: While quartz products are not hazardous as shipped, it is essential to implement appropriate safety measures during fabrication operations to prevent excess exposure to dust and protect against potential health hazards.

Composition:

Composition	CAS#	% by Weight (Approx.)
Quartz/Silica Sand	CAS: 14808-60-7	0-93
Cristobalite	CAS: 14464-46-1	0-93
Glass	CAS: 99439-28-8	0-35
Silver Nitrate	CAS: 7761-88-8	0-35
Polyester Resin	CAS: 113669-95-7	7-18
Titanium Dioxide	CAS: 13463-67-7	0-5
Pigment and Additives		0-5

First Aid Measures:

- Eye Exposure: Immediately flush eyes with copious amounts of water for a minimum of 15 minutes. Seek immediate medical attention if adverse effects persist.
- Skin Exposure: Wash the skin with soap and water. Remove exposed or contaminated clothing, taking care not to contaminate the eyes. Seek medical attention if adverse effects occur.
- Inhalation: Remove the affected person to fresh air. If necessary, provide artificial respiration. Seek prompt medical attention and keep the victim at rest.
- Ingestion: Not applicable for intact quartz products. If the material is accidentally swallowed, seek medical attention or advice.

Fire-Fighting Measures:

- Quartz Surface Products are difficult to combust. However, at elevated temperatures, the polymer and pigments may degrade, resulting in the release of various hydrocarbons, carbon dioxide, carbon monoxide, water, as well as fumes containing metal oxides and mica particles.

Extinguishing Media:

- Water, Dry Chemical, CO₂, Foam.
- Keep personnel removed and upwind of the fire.
- Wear self-contained breathing apparatus approved by OSHA/NIOSH (or equivalent) with pressure-demand mode
- Co-ordinate firefighting measures to the fire surroundings.
- Use appropriate extinguishing media, such as water, foam, dry extinguishing powder, or ABC-powder, for the surrounding fire.
- Avoid using a water jet as an extinguishing method.

Accidental Release Measures:

During cleanup and disposal of spills, solid slabs can be gathered as needed, while large amounts of dust or waste generated during cutting processes should be carefully vacuumed or swept to prevent dust generation. If spills occur, dampening the material with water is advised to minimize airborne dust. It is essential to wear appropriate respiratory protection and protective clothing. In the case of a significant release into waterways, contacting the Environmental Protection Authority or local Waste Management Authority is recommended. All waste should be disposed of in compliance with local, state, and federal regulations. Furthermore, it is crucial to take precautions to prevent drains, surface water, and ground water contamination. Clean-up methods involve mechanically taking up the spilled material and placing it in appropriate containers for disposal, ensuring adherence to all relevant regulations.

Handling, Storage, and Precautions:

For safe handling, it is advised to refrain from dry cutting the product using power tools during installation. When cutting, grinding, or polishing, wearing a respirator is necessary to minimize exposure to dust. Wet cutting methods should be utilized to reduce dust generation. Incorrect installation techniques may result in harmful silica dust exposure, while dry cutting methods pose a risk of acute lung injury. Due to its weight and fragility, it should be handled with care to prevent injury and damage.

When it comes to storage, it is recommended to avoid storing quartz products near acids to prevent potential damage or discoloration to the surface. The product can be stored in a cool, dry, and covered area. Palletize the slabs on appropriate stands, placing them finish to finish to prevent scratches.

Exposure controls / personal protection:

Components	CAS#	Control Parameters	Basis
Crystalline Silica	14808-60-7	0.025 mg/m ³ TWA (respirable) 0.05 mg/m ³ TWA (respirable) ((250)/(%SiO ₂ + 5) mppcf TWA (respirable)) ((10)/(%SiO ₂ + 2) mg/m ³ TWA (respirable)) ((30)/(%SiO ₂ + 2) mg/m ³ TWA (total dust))	ACGIH NIOSH OSHA-PELs

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.

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.

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: 490oC
- 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

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.

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.

Ecological Information:

- Environmental Toxicity ND
- Environmental Fate ND

Disposal Considerations:

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

Transportation Information:

Not classified as dangerous in the meaning of transport regulations