

VICOSTONE
The Art of Quartz



SAFETY DATA SHEET

Contents

1. PRODUCT AND COMPANY IDENTIFICATION	03
2. HAZARD(S) IDENTIFICATION	04
3. COMPOSITION/ INFORMATION ON INGREDIENTS	04
4. FIRST AID MEASURES	05
5. FIRE FIGHTING MEASURES	05
6. ACCIDENTAL RELEASE MEASURES	06
7. HANDLING AND STORAGE	06
8. EXPOSURE CONTROLS/ PERSONAL PROTECTION	06
9. PHYSICAL AND CHEMICAL PROPERTIES	08
10. STABILITY AND REACTIVITY	08
11. TOXICOLOGICAL INFORMATION	09
12. ECOLOGICAL INFORMATION	09
13. DISPOSAL CONSIDERATIONS	10
14. TRANSPORT INFORMATION	10
15. REGULATORY INFORMATION	10
16. OTHER INFORMATION	11

SDS Date: Decmber, 2017

1. Product and company identification

Product Name: **VICOSTONE® QUARTZ SURFACES**

Company: **VICOSTONE JOINT STOCK COMPANY**

Address: Hoa Lac Hi-tech Park, Hanoi, Vietnam

Email : *info@vicostone.com*

Website: *www.vicostone.com*

Phone number: +842 433 685 826

Fax: +842 433 686 652

2. Hazard(s) identification

VICOSTONE® Quartz Surfaces are safe for delivery, storage and use as certified by GREENGUARD for indoor air quality, children and schools and by NSF for food safety (ANSI 051). However, operations such as sawing, drilling, grinding, sanding and routing can generate silica dust. The fine dust of quartz (silicon dioxide) containing crystalline silica can cause potential health effects.

***Acute Eye:** Dusts and flying particles generated during cutting, grinding and forming may cause irritation to the eyes such as burning, redness, and tearing.

***Acute Skin:** Dusts generated from this product may cause skin irritation.

***Acute Inhalation:** Dusts from product may cause irritation to respiratory tract, nose, throat and lungs.

***Acute Ingestion:** Dust may cause gastrointestinal irritation if swallowed.

***Chronic Exposure:** Prolonged exposure to respirable crystalline silica can cause silicosis and has been linked to other diseases, such as lung cancer, tuberculosis, fibrosis of the lungs, chronic obstructive pulmonary disease and kidney disease. The risk of lung diseases will increase if smoking is combined with silica inhalation. Always use a respirator or particular mask when cutting or abrading this material and to avoid generating dust, wet cutting methods should be used.

***Aggravation of Pre-existing Conditions:** Not Determined.

3. Composition/ information on ingredients

Component	CAS#	% Composition
Crystalline Silica (quartz)	14808-60-7	Around 90
Polymeric Resin	N/A	7-12
Pigment and Trace Minerals	N/A	Around 2

4. First aid measures

- *Eye Exposure:** Immediately flush eyes with copious amounts of water for a minimum of 15 minutes. If irritation is present after washing, seek medical attention. To avoid eye exposure, always use protection with side shields when cutting or abrading the product.
- *Skin Exposure:** Wash skin with soap and water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Seek medical attention if adverse effects occur.
- *Inhalation:** Move the affected person from the hazardous exposure. If breathing is difficult, or has stopped, perform emergency rescue procedures such as artificial respiration or send for first aid or assistance.
- *Ingestion:** If the material is swallowed, seek medical attention or advice.

5. Fire fighting measures

- *Auto Ignition:** The product can be combusted only with difficulty. Decomposition products resulting from the polymer and pigments degrading at elevated temperatures include various hydrocarbons, carbon dioxide, carbon monoxide and water. Fumes of metal oxides and mica particles could also be released.
- *Extinguishing-Media:** Water, Dry Chemical, CO₂, and Foam
- *Fire Fighting-Instructions:** Keep all personnel removed from the area and from the upwind of fire. Fire fighters should wear complete fire protective clothing and self-contained breathing apparatus operated in positive pressure mode.

6. Accidental release measures

If VICOSTONE[®] Quartz Surface is accidentally broken, handle the broken pieces with industrial gloves and follow the safe handling procedures. The waste should be disposed of properly and follow the local, state and federal regulations for waste disposal.

If large amounts of dust develop during cutting or sawing processes then vacuum or sweep the dust and dampen the contaminated area with water to avoid the dust becoming airborne. Always wear respiratory protecting masks and protective clothing when handling silica dust. Seal all the waste in vapor tight containers for proper waste disposal. Care should be exercised all the time to ensure that the silica dust and sludge do not enter the waterways. If large quantities of this material enter the waterways, contact the Environmental Protection Authority, or local Waste Management Authority.

7. Handling and storage

VICOSTONE[®] Slabs are very heavy and breakable; handle carefully, with at least two people, to avoid injury and prevent damage. When handling this material always use industrial protective gloves and proper lifting devices. Also make sure that the lifting straps and lifting clamps are free from defects. Keep a safe distance when handling / lifting this material.

Proper industrial hygiene practices should be followed after working with materials containing silica. Use soap and water to wash hands thoroughly after work. Change into clean clothes before leaving the worksite.

8. Exposure controls/personal protection

*Exposure Guideline

Keep exposure to silica dust levels as low as possible, preferably below exposure standards:

Reference	Guideline or limit ($\mu\text{g}/\text{m}^3$)
Occupation Safety and Health Administration (www.osha.org)	OSHA permissible exposure limit (PEL) for respirable crystalline silica (quartz) is 50 $\mu\text{g}/\text{m}^3$ as an eight-hour time-weighted average (TWA)

<p>The national Institute of Occupational Safety and Health (NIOSH) (www.cdc.gov/niosh/)</p>	<p>Recommended Exposure Limit (REL) for respirable crystalline silica (quartz) is 50 µg/m³ of air as a TWA for up to a 10-hour work day of a 40-hour workweek.</p>
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***Engineering-Control:** Always cut the slabs in well ventilated areas with the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Use sharp and wet tools in fabrication and installation to substantially reduce the amount of dust generated.

***Respiratory-Protection:** Respirators may protect workers from inhaling crystalline silica dust when carefully and properly selected, worn and used. Use only respiratory protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces.

***Eye / Face-Protection:** During cutting, grinding or sanding operations, safety glasses with side shields or goggles should be worn.

***Skin Protection:** During cutting, grinding or sanding operations, use appropriate body protection for tasks including work gloves if handling sharp or rough edges and steel-toed shoes if lifting product.

***Hygiene-Protection:** Wash hands before eating and drinking and always wash contaminated clothes before using again.

9. Physical and chemical properties

*Physical-Appearance:	Multi-colored engineered stone
*Odor:	None
*PH:	NA
*Specific Gravity-Density:	2.2-2.5
*Water Solubility:	Insoluble
*Melting Point:	NA
*Freezing Point:	NA
*Boiling Point:	NA
*Vapor Pressure:	NA
*Percent Volatiles by Volume:	NA
*Evaporation Rate:	NA
*Viscosity:	NO
*Flash Point:	450°C
*Explosion Limits:	Lower: NO Upper: NO
*Auto Ignition-Temp:	At temperatures greater than 450°C, this product will auto ignite.

10. Stability and reactivity

*Stability:	Stable
*Conditions-to Avoid:	None
*Materials/Chemicals to be-Avoided:	This product is incompatible with hydrofluoric acid. Silica will dissolve in hydrofluoric acid and produce the corrosive gas silicon tetra fluoride.

***Hazardous
Decomposition
Products:**

Upon decomposition, various hydrocarbons, carbon dioxide, carbon monoxide fumes, and water may be released.

***Hazardous-
Polymerization:**

Will not occur.

11. Toxicological information

Health effects from the likely routes of exposure (inhalation, ingestion, skin and eye contact):

***Acute Effects:**

Inhalation (Human): 0.3mg/cubic meter/10 Y

LC Lo: Inhalation (Human): 16mppcf/8H/17.9 Y

TC Lo: Intermittent, focal fibrosis, pneumoconiosis, cough, dyspnoea

Inhalation (rat) TC Lo: 5.0 mg/cubic meter/6 H/71W- Intermittent – Liver Tumors.

***Chronic Effects:**

Prolonged and/or massive inhalation of crystalline silica can cause pulmonary fibrosis and pneumoconiosis and silicosis, as well as a worsening of other pulmonary diseases (bronchitis, emphysema, etc). The main symptom of silicosis is the loss of pulmonary capacity. People with silicosis have a greater risk of getting lung cancer.

***Warning for
Inhalation
Exposure only:**

Crystalline silica (respirable size) has been classified by the IARC as Group 1 Carcinogen to humans.

12. Ecological information

Environmental Fate: Not Determined

Environmental Toxicity: Not Determined

ISO 14001 Certification: VICOSTONE is granted the ISO 14001 certificate for Environmental Management Systems.

GREENGUARD Indoor Air Quality Certification & GREENGUARD Children and Schools Certification give assurance that VICOSTONE[®] Quartz Surfaces are safe for indoor air quality, children and schools.

Microbial Resistance Certification granted by the GREENGUARD Environmental Institute certifies the product to be resistant to surface molds, microbes, thus giving a guarantee of safety for environment and users.

ANSI Standard 051 – Food Equipment Materials granted by NSF proves the product to be safe for food contact.

13. Disposal considerations

***Waste Disposal Method:** Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. The process, usage or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose in accordance with federal, state and local requirements.

14. Transport information

*US Department of- Transportation:	Proper Shipping Name	Not Regulated
	Hazard Class	Not Regulated
*Transportation:	ID Number	Not Regulated
	Packing Group	Not Regulated

15. Regulatory information

*Fire Hazard:	No
*Reactive Hazard:	No
*Release of- Pressure:	No

*Acute Health-Hazard:	No
*Chronic Health-Hazard:	Yes
*TSCA:	All components of this product are on the TSCA inventory or are exempt from TSCA Inventory requirements.
*U.S. State-Regulations:	California Prop 65 List: Crystalline silica (quartz) is classified as a substance known to the state of California to be a carcinogen.

16. Other information

National Fire Protection Association NFPA and Hazardous Materials Identification System (HMIS) Hazard Rating:

*Health Hazard:	1
*Flammability:	0
*Reactivity:	0

ABBREVIATIONS:

*N/A:	Not Applicable
*ND:	Not Determined
*ACGIH:	American Conference of Governmental Industrial Hygienists
*OSHA:	Occupational Safety and Health Administration
*TLV:	Threshold Limit Value
*IDLH	Immediately Dangerous to Life and Health
*PEL:	Permissible Exposure Limit
*TWA:	Time Weighted Average
*STEL:	Short Term Exposure Limit
*NTP:	National Toxicology Program
*IARC:	International Agency for Research on Cancer
*VOCs:	Volatile Organic Contents

The information in this Safety Data Sheet is based on data available at the date of preparation of the document, which, to the best of our knowledge, was accurate and reliable. However, no warranty, implied or expressed, is given in relation to the accuracy of these data or the results to be obtained from the use thereof.

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This Safety Data Sheet is written according to the CLP Regulation, (EC) No 1272/2008. Regarding health & safety information about respirable fraction of crystalline silica (SiO₂), follow the instructions in VICOSTONE Health Safety Guideline Document or requirements of International Labor Organization (<http://www.ilo.org>), Occupational Safety and Health Administration (www.osha.org), US National Institute for Occupational Safety and Health (<http://www.cdc.gov/niosh/>), The Safe Work Australia (<http://www.safeworkaustralia.gov.au/>) and the European Network for silica (<http://www.nepsi.eu>)

Assistance requirements related to this document are welcome and shall be submitted to VICOSTONE.

Please contact VICOSTONE at +842 433 685 826 or email: support@vicostone.com .