

SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product: **Quartz Surfaces**
 Product Use: Quartz surfaces are designed for indoor use, particularly kitchen and bathroom worktops, flooring, cladding and other similar uses.
 Restriction of Use: Refer to Section 15
 New Zealand Supplier: **YJ Stone**
 Address: 293A Church Street
 Onehunga
 Auckland
 Telephone: +64 9 622 3068
Emergency No: 0800 764 766 (National Poison Centre)
 Date of SDS Preparation: 9 October 2019

Section 2. Hazards Identification

This substance is **NOT** hazardous according to the EPA Hazardous Substances (Classification) Notice 2017. However, dust derived from Fabrication Processes (cutting, grinding, chipping, sanding, drilling, polishing, etc. manufacturing processes) contains respirable crystalline silica (SiO₂). Hence, workers involved in Fabricating Processes, whether at the fabrication workshop or upon installing and removing/demolishing Quartz surfaces slabs are at risk for significant crystalline silica exposure.

If exposed to the dust only:

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.7A	H350	May cause cancer.	Carc. 1A
6.9A	H372	Causes damage to organs through prolonged or repeated exposure (inhalation).	STOT RE 1

Prevention Code	Prevention Statement
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P281	Use personal protective equipment as required.

Response Code	Response Statement
P314	Get medical advice/attention if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Quartz/silica sand	14808-60-7	<90
Cristobalite	14464-46-1	<50
Glass & mirror	Proprietary	<40
Polyester resin	Mixture	8-15
Titanium dioxide	13463-67-7	<3
Inorganic pigment mixture ³	Proprietary	<1
Other material	To bal	

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	If dust gets into the eyes rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice.
If on Skin	If dust on skin wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.
If Swallowed	Not a likely route of exposure.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Not applicable.

Inhalation: Workers who inhale very small crystalline silica particles are at risk for silicosis – an incurable, progressively disabling and sometimes fatal lung disease. Silicosis results in permanent lung damage. Silica dust particles become trapped in lung tissue, causing inflammation and scarring and reducing the lungs' ability to take in oxygen. Symptoms of silicosis can include shortness of breath, cough and fatigue, and may or may not be obviously attributable to silica. According to USA OSHA alert of Feb 2015, workers exposed to airborne crystalline silica also are at increased risk for lung cancer, chronic obstructive pulmonary disease (COPD) and kidney disease, and according to certain medical schools of thoughts, such workers are also at increased risk for auto-immune diseases (for example rheumatoid arthritis).

Skin & Eyes: Mineral dust may produce transitory mechanical irritation to skin and eyes.
Other: Persons with impaired respiratory function and chronic respiratory disorders may be more susceptible to the effects of this substance and may be adversely affected by any airborne particulate matter exposure. Smoking can increase the risk of lung injury. Inhalation may increase the progression of tuberculosis. Persons with preexisting skin disorders may be more susceptible to the effects of this material.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from decomposition products	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.

Suitable Extinguishing media	Water, dry chemical, CO ₂ and foam.
Precautions for firefighters and special protective clothing	Keep personnel away and upwind of fire. Use self-contained breathing apparatus with full face mask.
HAZCHEM CODE	None Allocated

Section 6. Accidental Release Measures

This product does not represent a risk of spillage. Solid slabs can simply be collected and disposed of.

Wear suitable respiratory protection and protective clothing (see Section 8).

If large amounts of dust are created by cutting use a HEPA vacuum system or dampen spilled material with water and sweep up wet material to avoid dust generation - DO NOT DRY SWEEP.). Put in a container for disposal. Dispose according to Section 13.

Section 7. Handling and Storage

Before starting work using engineered stone, businesses must complete a risk assessment and review their controls. It is important to eliminate uncontrolled dry cutting, grinding or polishing of engineered stone. If this is not reasonably practicable then exposures must be minimised.

Options include:

- substituting engineered stone for materials with a lower silica content
- isolating work areas or tasks that generate dust using physical barriers or computer numerical control (CNC) machines
- using engineering controls, such as local exhaust ventilation (LEV), water suppression (wet cutting), or on-tool dust extraction attachments. Wet sprays should be controlled by guards to prevent dust becoming airborne and wet waste must be managed. LEV system dust collectors or vacuums should be H-class HEPA filtered. Any LEV must be effective, fit for purpose, installed, set up and used correctly and maintained so that it remains effective
- further minimisation controls include administrative controls, such as good housekeeping practice (wet wiping, using an H-class HEPA-filtered vacuum, and low-pressure water cleaning – dry wiping or sweeping is not appropriate). If a risk still remains, use the appropriate personal protective equipment:
- use a suitable respirator with a filter cartridge with the appropriate assigned protection factor; the appropriate respirator and filter cartridge combination will be informed by exposure monitoring
- ensure the respirator is fit-tested for the worker, cleaned and maintained properly
- wear suitable work clothing such as coveralls that are disposable or can be laundered at the workplace to avoid taking them home.
- wear safety shoes and gloves during manual handling and storage operations of slabs. The product is heavy and breakable; handle with care to avoid injury and prevent damage. Look for your local safety regulations related to handling and working with heavy material.
- avoid breathing dust.
- store properly in a closed and covered place. Avoid strong impacts that may cause the material to crack.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

Crystalline Silica (quartz and cristobalite)	-	0.1	-	-
Titanium dioxide [13463-67-7]	-	10	-	-

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls

CNC machines and wet cutting methods are recommended to reduce generation of dust. When Fabricating the product, installing or removing/demolishing the installed product, use equipment with integral dust collection and/or use local exhaust ventilation in a safe manner to maintain the ambient workplace atmosphere below the relevant PEL. For cleaning and maintenance use HEPA vacuum and/or water cleaning systems. Never dry sweep or use compressed air.

Personal Protection Equipment



Eyes	During Fabrication operations use dust-proof goggles or safety glasses with side shields.
Hands & skin	Cotton or leather work gloves and steel-toed shoes should be worn when handling and transporting the product. During the Fabrication Process protective clothing should be worn to minimize cuts and/or skin exposure to dust.
Respiratory	Properly fitted respiratory protection equipment for protection against organic vapors and dusts is necessary to avoid inhalation of crystalline silica during the Fabrication Process of the product, and other processes that generate dust. The appropriate respirator selection depends on the type and magnitude of exposure. Use a positive pressure air supplied respirator if there is a potential for an uncontrolled release, exposure levels are not known, or under any other circumstance where air purifying respirators may not provide adequate protection.
General	Wash hands before eating, drinking, smoking, or using toilet facilities. Wash thoroughly after work using soap and water. Promptly remove dusty clothing (which is a source of respirable silica) and launder safely, preferably on site, separately from other clothes, before reuse.

Section 9 Physical and Chemical Properties

Appearance	Multi Coloured Engineered Stone - Solid
Colour	Multi Coloured
Odour	Odourless
Odour Threshold	Not available
pH	Not available
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Relative Density	2200-2350kg/m3.
Water Solubility	Insoluble in water
Partition Coefficient:	Not available
Auto-ignition	Not available

Temperature	
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	Not available
Conditions to Avoid	Avoid strong impacts that may cause the material to break.
Incompatible Materials	This product is incompatible with hydrofluoric acid.
Hazardous Decomposition Products	Thermal decomposition can release various hydrocarbons, carbon dioxide, carbon monoxide and water. Fumes of metal oxides and mica particles could also be released.

Section 11 Toxicological Information

No acute or chronic effects are known from exposure to the intact product.

During Fabrication and dust generated from the product the following health risk occur:

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Workers who inhale very small crystalline silica particles are at risk for silicosis – an incurable, progressively disabling and sometimes fatal lung disease. Silicosis results in permanent lung damage. Silica dust particles become trapped in lung tissue, causing inflammation and scarring and reducing the lungs' ability to take in oxygen. Symptoms of silicosis can include shortness of breath, cough and fatigue, and may or may not be obviously attributable to silica. According to USA OSHA alert of Feb 2015, workers exposed to airborne crystalline silica also are at increased risk for lung cancer, chronic obstructive pulmonary disease (COPD) and kidney disease, and according to certain medical schools of thoughts, such workers are also at increased risk for auto-immune diseases (for example rheumatoid arthritis).
Eyes & skin	Mineral dust may produce transitory mechanical irritation to skin and eyes.

Chronic Effects:

Carcinogenicity	Suspected of causing cancer.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Causes damage to organs through repeated or prolonged exposure through inhalation.

Individual component information:

Respiratory Effects

Crystalline Silica:

Exposure to respirable crystalline particles of a very small size (less than 10 microns) may cause silicosis, an incurable, progressively disabling and sometimes fatal lung disease. Silica dust particles become trapped in lung tissue, causing inflammation and scarring and reducing the lungs' ability to take in oxygen. Symptoms of silicosis can include progressive shortness of breath, cough and fatigue. Safety measures including wet processing and the use of effective respiratory protection will reduce the burden of inhaled dust and prevent the disease.

Titanium Dioxide

May cause lung fibrosis and nuisance particulate accumulation in lungs.

Toxicity Testing Data

Crystalline Silica:

Inhalation (human) LCLo: 0.3mg/m³/10

Inhalation (human) TCLo: 16mppcf/8H/17,9Y

Intermittent; focal fibrosis, (pneumoconiosis), cough, dyspnea

Inhalation (rat) TCLo: 50mg/m³/6H/71

Intermittent; liver – tumors

Oral LD50 RAT: 500 mg/kg

Section 12. Ecotoxicological Information

This product is not hazardous to the environment.

Product:	
Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Section 13. Disposal Considerations

Disposal Method:

Preferred options for disposal are (1) recycling, and (2) landfill. Dispose of according to Local Regulations.

Precautions or methods to avoid: None known.

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Section 15 Regulatory Information

This substance is NOT classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017.

Section 16 Other Information

Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.

LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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