

# Safety Data Sheet

## Hazardous, NON-Dangerous Goods

### 1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **Silica Flour 100G**

#### Synonyms

SiO<sub>2</sub>; crystalline silica; agate flint; amethyst celite; chalcedony cherts; silica flour; sand (CAS RN: 308075-07-2); chert; flintshot; Gold Bond R; Imsil; Novaculite; ground quartz; onyx; alpha-quartz; rose quartz; Min-u-sil; Silco-sil; silicic anhydride; silicon dioxide oxide; Silver Bond B; Snowit; Silex; Silica 300WQ; quartz sand; Silica Ferro 400; WIA Raw Materials Code 0710; Alsigran Micro 5; ASTM Testig Sands; Glass Sand; Flint Silica; DM Series; F-Series; Foundry Sands; FJ-Series\FP-Series; H-Series; L-Series; N-Seies; NJ-Series; OK-Series; P-Series; T-Series; Hydraulic Fracing Sands; Min-U-Sil Ground Silica; Mystic White #1 Dry; Penn Sand; Q-Rok; Supersil; Mason Sand; GS Series; Silica; quartz; quartzite

#### Product Code

**Recommended use:** In glass; ceramics, porcelain, pottery, vitreous enamels; in foundry metal moulding; refractory bricks; silica bricks; tombstones, water glass. Abrasive for metal finishing; metal polish; scouring and grinding compound. As sand: a component of building materials, concrete, mortar, macadam mixes As a silicone rubber reinforcing agent; flattening agent / filler in paints, primers, undercoats, woodfiller. In domestic scouring cleaners and powders. Minor component of cosmetics, pharmaceuticals, toothpaste, medicinals, insecticides, defoaming agents. Elemental silicon and ferrosilicon source. Pure quartz crystals in electronic components, piezoelectric control in oscillators, frequency standards, wave filters, radio and TV components.

**Supplier:** Tremco CPG Australia Pty Ltd  
**ABN:** 25 000 024 064  
**Street Address:** 12/4 Southridge Street  
Eastern Creek NSW 2766  
**Telephone:** 02 9638 2755  
**Facsimile:** 02 9638 2955

**Emergency Telephone number:** 02 9037 2994

### 2. HAZARDS IDENTIFICATION

This material is hazardous according to the criteria of Safe Work Australia GHS 7.



#### Signal Word

Warning

#### Hazard Classification

Specific Target Organ Toxicity (Repeated Exposure) - Category 2

#### Hazard Statement

H373 May cause damage to organs through prolonged or repeated exposure.

#### Prevention Precautionary Statements

P102 Keep out of reach of children.  
P103 Read carefully and follow all instructions.  
P260 Do not breathe dust, fume, gas, mist, vapours or spray.

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## Response Precautionary Statements

P101 If medical advice is needed, have product container or label at hand.  
P314 Get medical advice/attention if you feel unwell.

## Storage Precautionary Statement

Not allocated

## Disposal Precautionary Statement

P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

## Poison Schedule:

## DANGEROUS GOOD CLASSIFICATION

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

## 3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Quartz (SiO <sub>2</sub> )	14808-60-7	>=98 %
Ingredients determined to be Non-Hazardous		Balance
		100%

## 4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

**Inhalation:** If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.

**Skin Contact:** If skin or hair contact occurs: Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.

**Eye contact:** If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Ingestion:** Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**PPE for First Aiders:** Wear safety shoes, overalls, gloves, apron, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from butyl rubber, nitrile rubber, polyvinyl chloride (PVC) should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

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**Notes to physician:** Treat symptomatically. Treat symptomatically. Exposed workers should be medically examined regularly with emphasis on respiratory system. Individuals with pulmonary disease should be precluded from exposure.

## 5. FIRE FIGHTING MEASURES

**Hazchem Code:** Not applicable.

**Suitable extinguishing media:** If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

**Specific hazards:** Combustible material.

**Fire fighting further advice:** On burning or decomposing may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition.

## 6. ACCIDENTAL RELEASE MEASURES

### SMALL SPILLS

Remove all ignition sources. Clean up all spills immediately. Avoid contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Use dry clean up procedures and avoid generating dust. Place in a suitable, labelled container for waste disposal.

### LARGE SPILLS

Moderate hazard. CAUTION: Advise personnel in area. Alert Emergency Services and tell them location and nature of hazard. Control personal contact by wearing protective clothing. Prevent, by any means available, spillage from entering drains or water courses. Recover product wherever possible. IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal.

**Dangerous Goods - Initial Emergency Response Guide No:** Not applicable

## 7. HANDLING AND STORAGE

**Handling:** Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. DO NOT allow material to contact humans, exposed food or food utensils. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke.

**Storage:** Store in original containers. Keep containers securely sealed. Store in a cool, dry area protected from environmental extremes. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS. For major quantities: Consider storage in bunded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams). Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**National occupational exposure limits:**

	TWA	STEL	NOTICES	
	ppm	mg/m3	ppm	mg/m3

**Product Name:** Silica Flour 100G

**Reference No:** FCSF100G25

**Issued:** 2022-11-01

**Version:** 1.0

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Quartz (respirable dust)	-	0.05	-	-	Carc. 1A
Silica Crystalline - Quartz (respirable dust)	-	0.05	-	-	Carc. 1A

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

**Biological Limit Values:** As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

**Engineering Measures:** Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Avoid generating and inhaling dusts. Use with local exhaust ventilation or while wearing dust mask.

**Personal Protection Equipment:** SAFETY SHOES, OVERALLS, GLOVES, APRON, SAFETY GLASSES, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear safety shoes, overalls, gloves, apron, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from butyl rubber, nitrile rubber, polyvinyl chloride (PVC) should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

## RECOMMENDATIONS FOR CONSUMER USE:

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. Local exhaust ventilation usually required. Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the

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application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present: polychloroprene, nitrile rubber, butyl rubber, fluorocarbon, polyvinyl chloride. Gloves should be examined for wear and/or degradation constantly. Overalls, P.V.C apron, Barrier cream, Skin cleansing cream, Eye wash unit.

**Hygiene measures:** Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of dust. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	Solid
<b>Colour:</b>	Colourless, white to off white fine crystals. (reddish tan when impure) Insoluble in water. No odour. Very slightly soluble in strong alkali. Soluble in hot strong alkali. Soluble in concentrated hydrofluoric acid. High heat and heat shock resistance. Fuses with many metal oxides.
<b>Solubility in water:</b>	Insoluble
<b>Density:</b>	2.635 - 2.660
<b>Vapour Pressure:</b>	1.33 at 1732 C
<b>Melting Point/Range (°C):</b>	1610 - 1713
<b>Boiling Point/Range (°C):</b>	2230
<b>Evaporation Rate (n-Butyl acetate=1):</b>	Non volatile
<b>% Volatile by Volume:</b>	Nil
<b>Molecular Weight:</b>	60.08g/mol

(Typical values only - consult specification sheet)  
N Av = Not available, N App = Not applicable

## 10. STABILITY AND REACTIVITY

**Chemical stability:** Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.

**Conditions to avoid:** See section 7

**Incompatible materials:** See section 7

**Hazardous decomposition products:** See section 5

**Hazardous reactions:** See section 7

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

### Acute Effects

**Inhalation:** The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of dusts, or fumes, especially for prolonged periods, may produce

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respiratory discomfort and occasionally, distress. Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures. Effects on lungs are significantly enhanced in the presence of respirable particles. Acute silicosis occurs under conditions of extremely high silica dust exposure particularly when the particle size of the dust is small. The disease is rapidly progressive and spreads widely through the lungs within months of the initial exposure and causing death within 1 to 2 years.

**Skin contact:** The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

**Ingestion:** Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident. Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastro-intestinal tract.

**Eye contact:** There is some evidence to suggest that this material can cause eye irritation and damage in some persons. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

## Acute toxicity

**Inhalation:** This material has been classified as not hazardous for acute inhalation exposure. Acute toxicity estimate (based on ingredients):  $LC_{50} > 5.0$  mg/L for dust.

**Skin contact:** This material has been classified as not hazardous for acute dermal exposure. Acute toxicity estimate (based on ingredients):  $LD_{50} > 2,000$  mg/Kg bw

**Ingestion:** This material has been classified as not hazardous for acute ingestion exposure. Acute toxicity estimate (based on ingredients):  $LD_{50} > 2,000$  mg/Kg bw

Silica Flour # LD50 (Rat): =500 mg/kg[2] (Method: Oral - Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances)

**Corrosion/Irritancy:** Eye: this material has been classified as not corrosive or irritating to eyes. Skin: this material has been classified as not corrosive or irritating to skin.

**Sensitisation:** Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

**Aspiration hazard:** This material has been classified as not an aspiration hazard.

**Specific target organ toxicity (single exposure):** This material has been classified as not a specific hazard to target organs by a single exposure.

## Chronic Toxicity

**Mutagenicity:** This material has been classified as not a mutagen.

**Carcinogenicity:** This material has been classified as not a carcinogen.

**Reproductive toxicity (including via lactation):** This material has been classified as not a reproductive toxicant.

**Specific target organ toxicity (repeat exposure):** This material has been classified as a Category 2 Hazard.



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Harmful: danger of serious damage to health by prolonged exposure through inhalation. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Crystalline silicas activate the inflammatory response of white blood cells after they injure the lung epithelium. Chronic exposure to crystalline silicas reduces lung capacity and predisposes to chest infections. Overexposure to the breathable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function. Chronic symptoms may include decreased vital lung capacity and chest infections. Repeated exposures in the workplace to high levels of fine-divided dusts may produce a condition known as pneumoconiosis, which is the lodgement of any inhaled dusts in the lung, irrespective of the effect. This is particularly true when a significant number of particles less than 0.5 microns (1/50000 inch) are present. Lung shadows are seen in the X-ray. Symptoms of pneumoconiosis may include a progressive dry cough, shortness of breath on exertion, increased chest expansion, weakness and weight loss. As the disease progresses, the cough produces stringy phlegm, vital capacity decreases further, and shortness of breath becomes more severe. Other signs or symptoms include changed breath sounds, reduced oxygen uptake during exercise, emphysema and rarely, pneumothorax (air in the lung cavity).

## 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

**Acute aquatic hazard:** This material has been classified as not hazardous for acute aquatic exposure. Acute toxicity estimate (based on ingredients): > 100 mg/L

**Long-term aquatic hazard:** This material has been classified as not hazardous for chronic aquatic exposure. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log  $K_{ow}$  < 4.

**Ecotoxicity:** For Silica: Environmental Fate: Most documentation on the fate of silica in the environment concerns dissolved silica, in the aquatic environment, regardless of origin, (man-made or natural), or structure, (crystalline or amorphous). Terrestrial Fate: Silicon makes up 25.7% of the Earth's crust, by weight, and is the second most abundant element, being exceeded only by oxygen. Silicon is not found free in nature, but occurs chiefly as the oxide and as silicates. Once released into the environment, no distinction can be made between the initial forms of silica. Aquatic Fate: At normal environmental pH, dissolved silica exists exclusively as monosilicic acid. At pH 9.4, amorphous silica is highly soluble in water. Crystalline silica, in the form of quartz, has low solubility in water. Silicic acid plays an important role in the biological/geological/chemical cycle of silicon, especially in the ocean. For Metal: Atmospheric Fate - Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air. Environmental Fate: Environmental processes, such as oxidation, the presence of acids or bases and microbiological processes, may transform insoluble metals to more soluble ionic forms. Environmental processes may enhance bioavailability and may also be important in changing solubilities. Aquatic/Terrestrial Fate: When released to dry soil, most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/ or surface water ecosystems when soaked by rain or melt ice. A metal ion is considered infinitely persistent because it cannot degrade further. Once released to surface waters and moist soils their fate depends on solubility and dissociation in water. A significant proportion of dissolved/ sorbed metals will end up in sediments through the settling of suspended particles. The remaining metal ions can then be taken up by aquatic organisms. Ionic species may bind to dissolved ligands or sorb to solid particles in water. DO NOT discharge into sewer or waterways. May be harmful to fauna if not disposed of according to Section 13 and legislative requirements. [AMC]

**Persistence and degradability:** No information available.

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

## 13. DISPOSAL CONSIDERATIONS

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must

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refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction Reuse Recycling Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the supplier of the material should be consulted. DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Management Authority for disposal. Bury residue in an authorised landfill. Recycle containers if possible, or dispose of in an authorised landfill.

## 14. TRANSPORT INFORMATION

### ROAD AND RAIL TRANSPORT

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

### MARINE TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

### AIR TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

## 15. REGULATORY INFORMATION

### This material is not subject to the following international agreements:

- Montreal Protocol (Ozone depleting substances)
- The Stockholm Convention (Persistent Organic Pollutants)
- The Rotterdam Convention (Prior Informed Consent)
- Basel Convention (Hazardous Waste)
- International Convention for the Prevention of Pollution from Ships (MARPOL)

### This material/constituent(s) is covered by the following requirements:

The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act (Commonwealth): .

## 16. OTHER INFORMATION

Reason for issue: First Issue

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.