## **Barossa Quarries Pty Ltd**

Chemwatch Hazard Alert Code: 2

Issue Date: 22/11/2022 Print Date: 22/11/2022 L.GHS.AUS.EN.E

#### SECTION 1 Identification of the substance / mixture and of the company / undertaking

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

#### **Product Identifier**

Chemwatch: 4986-18

Version No: 7.1

Product name	Barossa Quarries Granite
Chemical Name	Not Applicable
Synonyms	Black Granite; Burgundy Granite; Calca Granite; Harcourt Granite; Murray Bridge Granite; Padthaway Green Granite; Riverina Granite; Sienna Granite
Chemical formula	Not Applicable
Other means of identification	Not Available

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Decorative aggregate used in building products, precast concrete, tiles, pavers, landscaping.
	Use according to manufacturer's directions.

#### Details of the manufacturer or supplier of the safety data sheet

Registered company name	Barossa Quarries Pty Ltd
Address	202 Radford Road Angaston SA 5353 Australia
Telephone	0885642227
Fax	0885643045
Website	www.barossaquarries.com
Email	info@barossaquarries.com

## Emergency telephone number

Association / Organisation	Stephen Falland
Emergency telephone numbers	0885642227 (Mon-Fri 7:30am to 4pm)
Other emergency telephone numbers	Not Available

## **SECTION 2 Hazards identification**

# Classification of the substance or mixture Poisons Schedule Not Applicable Classification [1] Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Toxicity - Repeated Exposure Category 2 Legend: 1. Classified by Chernwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

#### Label elements

Hazard pictogram(s)	
Signal word	Warning
Hazard statement(s)	

H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statement(s) Prevention

P260	Do not breathe dust/fume.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

## Precautionary statement(s) Response

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P305+P351+P338
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1+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P314	Get medical advice/attention if you feel unwell.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
Precautionary statement(s) Storage		
Not Applicable		

#### Not Applicable

Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

## **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
Not Available		granite
Not Available		when cut granite generates
Not Available	>60	granite dust
Not Available		which may contain
14808-60-7	1-10	silica crystalline - quartz
Legend:	<ol> <li>Classified by Chemwatch; 2. Classification of Classification drawn from C&amp;L * EU IOELVs a</li> </ol>	trawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4.

#### **SECTION 4 First aid measures**

## Description of first aid measures

Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Wash out immediately with fresh running water.</li> <li>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.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	<ul> <li>If skin contact occurs:</li> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>
Inhalation	<ul> <li>If fumes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>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.</li> <li>Transport to hospital, or doctor.</li> <li>If dust is inhaled, remove from contaminated area.</li> <li>Encourage patient to blow nose to ensure clear breathing passages.</li> <li>Ask patient to rinse mouth with water but to not drink water.</li> <li>Seek immediate medical attention.</li> </ul>
Ingestion	<ul> <li>Immediately give a glass of water.</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

#### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## **SECTION 5 Firefighting measures**

## Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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## Advice for firefighters

Advice for menginers	
Fire Fighting	<ul> <li>When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles.</li> <li>When heated to extreme temperatures, (&gt;1700 deg.C) amorphous silica can fuse.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water courses.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> <li>DO NOT approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> </ul>

	Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	<ul> <li>Non combustible.</li> <li>Not considered a significant fire risk, however containers may burn.</li> <li>Decomposition may produce toxic fumes of: silicon dioxide (SiO2) metal oxides</li> <li>May emit poisonous fumes.</li> <li>May emit corrosive fumes.</li> </ul>
HAZCHEM	Not Applicable

## **SECTION 6 Accidental release measures**

## Personal precautions, protective equipment and emergency procedures

See section 8

## **Environmental precautions**

See section 12

## Methods and material for containment and cleaning up

Minor Spills	<ul> <li>Clean up waste regularly and abnormal spills immediately.</li> <li>Avoid breathing dust and contact with skin and eyes.</li> <li>Wear protective clothing, gloves, safety glasses and dust respirator.</li> <li>Use dry clean up procedures and avoid generating dust.</li> <li>Vacuum up or sweep up. NOTE: Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider explosion-proof machines designed to be grounded during storage and use).</li> <li>Dampen with water to prevent dusting before sweeping.</li> <li>Place in suitable containers for disposal.</li> </ul>
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by all means available, spillage from entering drains or water courses.</li> <li>Consider evacuation (or protect in place).</li> <li>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</li> <li>Stop leak if safe to do so.</li> <li>Water spray or fog may be used to disperse / absorb vapour.</li> <li>Contain or absorb spill with sand, earth or vermiculite.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> <li>Wash area and prevent runoff into drains.</li> <li>After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and storage

Precautions for safe handling	
Safe handling	<ul> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> <li>DO NOT allow material to contact humans, exposed food or food utensils.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, DO NOT eat, drink or smoke.</li> <li>Keep containers securely sealed when not in use.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul>
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry area protected from environmental extremes.</li> <li>Store away from incompatible materials and foodstuff containers.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>For major quantities:</li> <li>Consider storage in bunded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams).</li> <li>Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.</li> </ul>

## Conditions for safe storage, including any incompatibilities

Suitable container	Multi-ply paper bag with sealed plastic liner or heavy gauge plastic bag.
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	NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse. Check that all containers are clearly labelled and free from leaks. Packing as recommended by manufacturer.
Storage incompatibility	<ul> <li>Silicas:</li> <li>react with hydrofluoric acid to produce silicon tetrafluoride gas</li> <li>react with xenon hexafluoride to produce explosive xenon trioxide</li> <li>reacts exothermically with oxygen difluoride, and explosively with chlorine trifluoride (these halogenated materials are not commonplace industrial materials) and other fluorine-containing compounds</li> <li>may react with fluorine, chlorates</li> <li>are incompatible with strong oxidisers, manganese trioxide, chlorine trioxide, strong alkalis, metal oxides, concentrated orthophosphoric acid, vinyl acetate</li> <li>may react vigorously when heated with alkali carbonates.</li> <li>Avoid strong acids, bases.</li> </ul>

## SECTION 8 Exposure controls / personal protection

## **Control parameters**

#### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name		TWA	ST	EL	Peak	Notes
Australia Exposure Standards	silica crystalline - quartz	Silica - Crystalline: Quartz (respirable dust)		0.05 mg/m3	Not Available		Not Available	Not Available
Emergency Limits								
Ingredient	TEEL-1		TEEL-2			TEEL-3		
silica crystalline - quartz	0.075 mg/m3		33 mg/m3		200 mg/m3			
hanna Parat								
Ingredient	Original IDLH			Rev	lsed IL	DLH		
granite	Not Available		Not	Availal	ole			
granite dust	Not Available			Not Available				
silica crystalline - quartz	25 mg/m3 / 50 mg/m3			Not	Availal	ole		
Occupational Exposure Banding	1							

Cooperional Exposure Danumg					
Ingredient	Occupational Exposure Band Rating Occupational Exposure Band Limit				
granite	E	≤ 0.01 mg/m³			
granite dust	E	≤ 0.01 mg/m³			
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.				

#### MATERIAL DATA

#### Exposure controls

Appropriate engineering controls	<ul> <li>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:</li> <li>Process controls which involve changing the way a job activity or process is done to reduce the risk.</li> <li>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.</li> <li>Employees exposed to confirmed human carcinogens should be authorized to do so by the employer, and work in a regulated area.</li> <li>Work should be undertaken in an isolated system such as a "glove-box". Employees should was their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.</li> <li>Within regulated areas, the carcinogen should be stored in sealed containers, or enclosed in a closed system, including piping systems, with any sample ports or openings closed while the carcinogens are contained within.</li> <li>Open-vessel systems are prohibited.</li> <li>Each operation should be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation.</li> <li>Exhaust air should not be discharged to regulated areas, non-regulated areas or the external environment unless decontaminated. Clean make-up air should be introduced in sufficient volume to maintain correct operation of the local exhaust system.</li> <li>For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, im</li></ul>
Personal protection	
_	<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> </ul>

Eye and face protection

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. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]
Skin protection	See Hand protection below
Hands/feet protection	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 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 dired throughly, Application of a non-perfured moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: - thereincal resistance of glove material, - glove thickness and - divertify Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent) When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended Some glove polymer types are less alfacted by movement and this should be taken into account when considering gloves for long-term use Contaminated gloves should be replaced. As Some Store polymer types are less alfacted by movement and this should be taken into account when considering gloves for long-term sec Contaminated gloves whole the eyades. The romation and provide plant the most store of the glove model. Therefore, the manufacturer, the glove with a brokense typically greater than 0.35 mm, are recommended Some glove plant the safe store of the maxy ago direction of glove resistance to a specific chemical, as the permeation officiency of the glove will be dependent on the exact composition of the digive model. Therefore, the manufacturers technical dist shou
Body protection	See Other protection below
Other protection	<ul> <li>Overalls.</li> <li>P.V.C apron.</li> <li>Barrier cream.</li> <li>Skin cleansing cream.</li> <li>Eye wash unit.</li> </ul>

#### **Respiratory protection**

Type -P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1 Air-line*	-	PAPR-P1 -
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

\* - Negative pressure demand \*\* - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

If inhalation risk above the TLV exists, wear approved dust respirator.

Use respirators with protection factors appropriate for the exposure level.

- ▶ Up to 5 X TLV, use valveless mask type; up to 10 X TLV, use 1/2 mask dust respirator ۶
- Up to 50 X TLV, use full face dust respirator or demand type C air supplied respirator
- ۲ Up to 500 X TLV, use powered air-purifying dust respirator or a Type C pressure demand supplied-air respirator
- Over 500 X TLV wear full-face self-contained breathing apparatus with positive pressure mode or a combination respirator with a Type C positive pressure supplied-air full-face respirator and an auxiliary self-contained breathing apparatus operated in pressure demand or other positive pressure mode
   Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.

• The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).

Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.

Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
 Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

 $\cdot$  Use approved positive flow mask if significant quantities of dust becomes airborne.

 $\cdot$  Try to avoid creating dust conditions.

#### **SECTION 9** Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance	Solid odourless block; insoluble in water.		
Physical state	Divided Solid	Relative density (Water = 1)	>2
Odour	No Odour	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Applicable

## **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

## **SECTION 11 Toxicological information**

#### Information on toxicological effects

Inhaled	Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. 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. Overexposure to respirable dust may produce wheezing, coughing and breathing difficulties leading to or symptomatic of impaired respiratory function. Acute silicosis occurs under conditions of extremely high silica dust exposure particularly when the particle size of the dust is small. It differs greatly from classical silicosis both clinically and pathologically. The disease is rapidly progressive with diffuse pulmonary involvement developing only months after the initial exposure and causing deatts within 1 to 2 years. It is often complicated by an associated tuberculosis. The lungs of victims contain no classical silico
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Ingestion	The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. 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. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.
	Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.
Skin Contact	Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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.
Eye	Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.
Chronic	association between human exposure to the material and the development of cancer. Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure. As a rule the material produces, or contains a substance which produces severe lesions. Such damage may become apparent following direct application in subchronic (90 day) toxicity studies or following sub-acute (28 day) or chronic (two-year) toxicity tests. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Chronic symptoms produced by crystalline silicas included decreased vital lung capacity and chest infections. Lengthy exposure may cause silicosis a disabiling form of pneumoconiosis which may lead to fibrosis, a scarring of the lining of the air sacs in the lung. The form and severity in which silicosis manifests itself depends in part on the type and extent of exposure to silica dusts: chronic, accelerated and acute forms are all recognized. In later stages the critical condition may become disabiling and potentially fatal. Restrictive and/or obstructive lung function changes may result from chronic exposure. A risk associated with silicosis is development of pulmonary tuberculosis (silico- tuberculosis). Respiratory insufficiencies due to massive fibrosis and reduced pulmonary function, possibly with accompanying heart failure, are other potential causes of death due to silicosis. Not all individuals with silicosis will exhibit symptoms of silicosis may include (but are not limited to). Shortness of breath, difficulty breating with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; heart enlargement and/or failure. Respirable dust containing older silica particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles has been show
	equivocal with some studies supporting the proposition and others finding no significant association. The results of recent epidemiological studies suggest that lung cancer risk is elevated only in those patients with overt silicosis. A relatively large number of epidemiological studies have been undertaken and in some, increased risk gradients have been observed in relation to dose surrogates - cumulative exposure, duration of exposure, the presence of radiographically defined silicosis, and peak intensity exposure. Chronic inhalation in rats by single or repeated intratracheal instillation produced a significant increase in the incidences of adenocarcinomas and squamous cell carcinomas of the lung. Lifetime inhalation of crystalline silica (87% alpha-quartz) at 1 mg/m3 (74% respirable) by rats, produced an increase in animals with keratinising cystic squamous cell tumours, adenomas, adenocarcinomas, adenosquamous cell carcinomas and nodular bronchiolar alveolar hyperplasia accompanied by extensive subpleural and peribronchiolar fibrosis, increased pulmonary collagen content, focal lipoproteinosis and macrophage infiltration. Thoracic and abdominal malignant lymphomas developed in rats after single intrapleural and intraperitoneal injection of suspensions of several types of quartz. Some studies show excess numbers of cases of schleroderma, connective tissue disorders, lupus, rheumatoid arthritis chronic kidney diseases, and end-stage kidney disease in workers NOTE: Some jurisdictions require health surveillance be conducted on workers occupationally exposed to silica, crystalline. Such surveillance should emphasise         demography, occupational and medical history and health advice         standardised respiratory function tests such as FEV1, FVC and FEV1/FVC         chest X-ray, full size PA view         records of presonal exposure

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 (1/5000 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).

Barossa Quarrias Granita	TOXICITY	IRRITATION
Daiossa Quarries Grainte	Not Available	Not Available
	ΤΟΧΙΟΙΤΥ	IRRITATION
granite	Not Available	Not Available
granite dust	тохісітү	IRRITATION
	Not Available	Not Available
	тохісітү	IRRITATION
silica crystalline - quartz	Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup>	Not Available
Legend:	<ol> <li>Value obtained from Europe ECHA Registered Sub specified data extracted from RTECS - Register of Tox</li> </ol>	stances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise xic Effect of chemical Substances
	·	

GRANITE	asthma-like symptoms within minutes to hours of a data airflow pattern on lung function tests, moderate to sev lymphocytic inflammation, without eosinophilia. RADS the concentration of and duration of exposure to the in result of exposure due to high concentrations of irritati disorder is characterized by difficulty breathing, cough	becumented exposure to the irritant. Oth vere bronchial hyperreactivity on metha § (or asthma) following an irritating inh- rritating substance. On the other hand ing substance (often particles) and is on and mucus production.	her criteria for diagnosis of RADS include a reversible acholine challenge testing, and the lack of minimal alation is an infrequent disorder with rates related to , industrial bronchitis is a disorder that occurs as a completely reversible after exposure ceases. The
SILICA CRYSTALLINE - QUARTZ	WARNING: For inhalation exposure <u>ONLY</u> : This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS The International Agency for Research on Cancer (IARC) has classified occupational exposures to respirable (<5 um) crystalline silica as being carcinogenic to humans . This classification is based on what IARC considered sufficient evidence from epidemiological studies of humans for the carcinogenicity of inhaled silica in the forms of quartz and cristobalite. Crystalline silica is also known to cause silicosis, a non-cancerous lung disease. Intermittent exposure produces; focal fibrosis, (pneumoconiosis), cough, dyspnoea, liver tumours. * Millions of particles per cubic foot (based on impinger samples counted by light field techniques). NOTE : the physical nature of quartz in the product determines whether it is likely to present a chronic health problem. To be a hazard the material must enter the breathing zone as respirable particles.		
<b>GRANITE &amp; GRANITE DUST</b>	No significant acute toxicological data identified in lite	rature search.	
Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	*
Mutagenicity	X	Aspiration Hazard	X

Legend: X - Data either not available or does not fill the criteria for classification

## Data available to make classification

## **SECTION 12 Ecological information**

## Toxicity

	Endpoint	Test Duration (hr)	Species	Value	Source
Barossa Quarries Granite	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
granite	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
granite dust	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
silica crystalline - quartz	Not Available	Not Available	Not Available	Not Available	Not Available

Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan)

# DO NOT discharge into sewer or waterways.

- Bioconcentration Data 8. Vendor Data

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients
Bioaccumulative poter	ntial	
Ingredient	Bioaccumulation	
	No Data available for all ingredients	
Mobility in soil		
Ingredient	Mobility	
	No Data available for all ingredients	

#### **SECTION 13 Disposal considerations**

#### Waste treatment methods Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: F If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and SDS and observe all notices pertaining to the product. DO NOT allow wash water from cleaning or process equipment to enter drains. Product / Packaging disposal 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.

## **SECTION 14 Transport information**

Labels Required	
Marine Pollutant	NO
HAZCHEM	Not Applicable

#### Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
granite	Not Available
granite dust	Not Available
silica crystalline - quartz	Not Available

## Transport in bulk in accordance with the ICG Code

Product name	Ship Type
granite	Not Available
granite dust	Not Available
silica crystalline - quartz	Not Available

## SECTION 15 Regulatory information

## Safety, health and environmental regulations / legislation specific for the substance or mixture

granite is found on the following regulatory lists

Not Applicable

granite dust is found	d on the following	regulatory lists

Not Applicable

silica crystalline - quartz is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Model Work Health and Safety Regulations - Hazardous chemicals (other than lead) requiring health monitoring

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

#### **National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (silica crystalline - quartz)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

## **SECTION 16 Other information**

Revision Date	22/11/2022
Initial Date	18/12/2007

#### **SDS Version Summary**

Version	Date of Update	Sections Updated
6.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
7.1	22/11/2022	Acute Health (eye), Acute Health (inhaled), Acute Health (skin), Acute Health (swallowed), Appearance, Chronic Health, Classification, Disposal, Engineering Control, Environmental, Fire Fighter (extinguishing media), Fire Fighter (fire/explosion hazard), Fire Fighter (fire fighting), Fire Fighter (fire incompatibility), First Aid (inhaled), First Aid (skin), Handling Procedure, Instability Condition, Personal Protection (other), Personal Protection (Respirator), Personal Protection (eye), Personal Protection (hands/feet), Spills (major), Spills (minor), Storage (storage incompatibility), Storage (storage requirement), Storage (suitable container), Use

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average PC-STEL: Permissible Concentration-Short Term Exposure Limit IARC: International Agency for Research on Cancer ACGIH: American Conference of Governmental Industrial Hygienists STEL: Short Term Exposure Limit TEEL: Temporary Emergency Exposure Limit。 IDLH: Immediately Dangerous to Life or Health Concentrations ES: Exposure Standard OSF: Odour Safety Factor NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value **BCF: BioConcentration Factors** BEI: Biological Exposure Index AIIC: Australian Inventory of Industrial Chemicals **DSL: Domestic Substances List** NDSL: Non-Domestic Substances List IECSC: Inventory of Existing Chemical Substance in China EINECS: European INventory of Existing Commercial chemical Substances ELINCS: European List of Notified Chemical Substances NLP: No-Longer Polymers ENCS: Existing and New Chemical Substances Inventory KECI: Korea Existing Chemicals Inventory

NZIoC: New Zealand Inventory of Chemicals PICCS: Philippine Inventory of Chemicals and Chemical Substances TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory INSQ: Inventario Nacional de Sustancias Químicas NCI: National Chemical Inventory FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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