BARRO GROUP

Safety Data Sheet (SDS)
Quarry Products

Section 1: Identification of Material and Supplier

Supplier	Barro Group Pty Limited (and its business units/divisions/trading entities and subsidiaries) ACN 005 105 724
Address	191 Drummond Street Carlton Vic 3053 Australia
Telephone / Facsimile	Tel: 03) 8656 3900 Fax: 03) 9663 2555
Email	barro@barro.com.au
Emergency Telephone	000 (fire brigade, ambulance, police) Australia only
Poisons Information Centre	13 11 26 Australia only
Product Name	Aggregates, Road Base, Crushed Rock, Sand, Fill, Gravel, Blue Metal, Quartz Sand (quarry materials)
Use: Quarry products are used in building construction and for civil engineering and other construction projects Other information: NA	

Section 2: Hazards Identification

Classified as **Hazardous** in accordance with the GHS/Safe Work Australia criteria.
Classified as **Non-Dangerous** Goods according to the Australian Code for Transport of Dangerous Goods by Road and Rail
Product contains crystalline silica. Crystalline silica dust is classified as Hazardous

This product as supplied is classified as non-Hazardous. Dust in/on the supplied product or created when the product is processed, abraded, or crushed contains crystalline silica some of which may be respirable (particles small enough to go into the deep parts of the lung when breathed in) and which is classified as **Hazardous**

The following Risk and Safety phrases apply to this product

GHS CLASSIFICATION		
GHS Classification	**GHS Signal Word**	**GHS Pictogram**
Specific Target Organ Toxicity (repeated exposure to dust)- Category 2	**Danger**	

GHS HAZARD (RISK) STATEMENTS	
H372, H373	May cause damage to organs (lungs) through prolonged or repeated exposure to dust if inhaled
GHS PRECAUTIONARY (SAFETY) STATEMENTS	
P260	Do not breath dust
P280	Wear protective gloves/protective clothing/eye protection/face protection
P305, P351, P338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P270	Do not eat or drink while using/handling product/s
P272	Contaminated work clothing (dust) should not be allowed out of the workplace
P363	Wash contaminated clothing before reuse

Section 3: Composition / Information on Ingredients

Significant constituents:

Chemical Name	Proportion:
Ingredients usually present:	
° Sand – containing crystalline silica (quartz)	0-30% (CAS No 14808-60-7)
° Crushed stone, gravel	to 100% (CAS No not req)

Quarry materials are naturally occurring materials excavated and processed at hard rock quarries, gravel pits and sand pits. Depending on the source of the material the crystalline silica (quartz) content of any particular quarry product can range from 0% to 100%

Other ingredients may be added:
Quarry Products/Materials are mostly supplied from naturally occurring materials excavated and processed at hard rock and sand/gravel pit quarries. To meet physical properties and customer specifications, blending of quarry materials from other quarries/sources can occur. Aggregates are precoated with bitumen/diesel fuel mixture for road sealing. Recycling of building demolition materials such as concrete may be reprocessed and sold as quarry materials. Portland Cement or

Section 3: Composition / Information on Ingredients

Slag/Fly Ash may be used for cement treated quarry products and in quarry products. Depending on the source of the materials/deposit crystalline silica (quartz) content of any quarry product can vary from zero to 100%.

Some products such as road base, stabilised, pre-coated aggregates are made by blending with other materials from other quarry sources or other sources to meet customer specifications of the required physical properties.

° Portland Cement	0-4% (CAS No 65997-15-1)
° Blast furnace Slag or Fly Ash	0-4%
° Pozzolans	0-4%
° Precoat (diesel, bitumen)	0-1%
° Lime	0-4%

Section 4: First Aid Measures

Swallowed: Wash out mouth with cold clean water. DO NOT induce vomiting. Then drink water at significant levels and seek medical advice.

Eye: Thorough washing with much clean flowing water, preferably sterile, for at least 15 minutes with eyelids open. Seek medical attention immediately for thorough examination of eye surface if irritation, redness or other symptoms persist.

Skin: Remove heavily contaminated clothing, wash skin thoroughly with tepid water and non-abrasive soap if necessary and remove source of contamination. If symptoms such as redness, irritation or burning of skin develop and persists, seek medical attention.

Inhaled: Remove source of contamination and move victim away from dusty area to fresh air. Have a qualified person give oxygen through face mask and if irritation continues, seek medical advice.

First Aid Facilities: Eye wash and normal washroom facilities

Advice to Doctor: Treat symptomatically or consult Poisons Information Centre.

Section 5: Fire Fighting Measures

° Flammability	:	Non-flammable or combustible
° Hazards from combustion products	:	Nil
° Suitable extinguisher media	:	Not applicable
° Special protective precautions and equipment for fire fighters	:	Nil
° Hazchem code	:	None allocated

Section 6: Accidental Release Measures

Spills and Disposal:

- Avoid dust generation – wetting down may assist control measures.
- Dust is best cleaned by mechanical means (sweepers/vacuums) wherever possible to avoid making dust airborne.
- Exposure control and personal protection recommendations should be followed during cleanup if dusty conditions

Section 7: Handling and storage

Storage Precautions: No special storage requirements.
Transport: Not classified as a Dangerous Goods.
Proper Shipping Name None allocated

Section 8: Exposure Controls/Personal Protection

The following applies to Dust from this product:

Exposure Limits:
Workplace Exposure Standards (WES) for airborne contaminants – Safe Work Australia
Keep exposure to dust as low as practicable and below the following WES:

- Crystalline Silica (quartz): 0.05mg/m^3 TWA (time weighted average) as respirable dust.
- Total dust NOS (not otherwise specified (of any type or particle size): 10mg/m^3 TWA as inhalable dust

Engineering Controls
- Avoid generating dust and inhaling dusts and minimize exposure to dust.
- Provide adequate mechanical ventilation and/or local dust extraction/collection or water spray to control airborne dust levels.
- Clean work areas regularly.

Eye Protection:
- Use **Safety Glasses** with side shields, safety goggles/face shields. AS/NZS 1336.

Skin Protection:
- Wash work clothes regularly; maintain high level of personal hygiene; wash hands before eating, using the toilet
- Remove contaminated clothing
- Wash skin with tepid water and mild non-abrasive soap – if irritation persists seek medical attention.

Respirator Type
- Where engineering controls are not enough to minimize exposure to total dust and to respirable crystalline silica, **personal respiratory protection** may be required. Depending on the work circumstances, a suitable P2 particulate respirator chosen and used in accordance with AS/NZS 1715 and AS/NZS 1716 may be sufficient, however where higher levels of dust are encountered cartridge or powered types of respirators may be necessary. Ensure only respirators bearing the Australian Standards mark are fitted and correctly maintained.
- Where dust levels are approaching or exceeding the WES above greater respiratory protection may be required.
- Do not shake out work clothes, shoes before laundering so as to ensure the home environment is not contaminated

Note – all occupational exposures to atmospheric contaminants should be kept as low as reasonably practicable and in all cases be below the WES.

Section 9: Physical and Chemical Properties

Appearance:
Colour, shape and texture vary considerably depending on the source of the quarry products. May range from fine grains (sand) to large dark rocks (aggregates/roadbase). Size and texture vary from smooth and rounded to angular and rough depending on processing at quarries

Odour	None	Ph	3.0-10.0
Vapour pressure	NA	Vapour Density	NA
Boiling Point/range	NA	Freezing/melting point	NA
Solubility	Not soluble	Specific gravity	2.2-2.7(water=1)
Flash point	NA	Ignition temperature	NA
Upper/lower flammability limits	NA		
Particle size	proportion of dust may be respirable (below 10 microns) and constitutes an exposure if It becomes airborne		

Section 10: Stability and Reactivity

Conditions to avoid:	dust generation
Chemical stability:	chemically stable
Incompatible materials:	none
Hazardous decomposition products:	none
Hazardous reactions	none

Crystalline silica is stable, compatible with other materials and does not polymerise, and will not decompose into hazardous by-products

Section 11: Toxicological Information

Health Effects

Acute (short term)

Swallowed - unlikely in normal industrial situation. Mildly abrasive to mouth and throat if swallowed.

Eye: irritation caused by dust. Exposure to dust may aggravate pre-existing eye conditions.

Skin - dust may cause mild irritation and drying to the skin due to its physical characteristics
Inhaled - Dust is mildly irritating to the nose, throat and respiratory tract – may cause sneezing/coughing. Dust may aggravate pre-existing upper respiratory and lung diseases including asthma and bronchitis.

Chronic (Long Term)

Eyes – dust may cause inflammation of the cornea and aggravate pre-existing eye conditions
Skin – repeated heavy contact causes irritation and drying of the skin and can result in persistent skin reddening and rash (dermatitis). Typically hands may be affected and over time become chronic and may also become infected
Inhaled - Inhalation of airborne particles from other sources in the work environment, including those from cigarette smoke, may cause the risk of respiratory diseases. It is recommended that all storage and work areas should be smoke-free zones and that other airborne contaminants should be kept to a minimum. Repeated exposure to dust may result in increased nasal and respiratory secretions and coughing. Inflammation of lining tissue of the respiratory system may follow repeated exposure to high levels of dust with increased risk of bronchitis and pneumonia.
The product contains a proportion of respirable free crystalline silica in quartz component; crystalline silica (inhaled in the form of quartz or cristobalite from occupational sources) is classified by the International Agency for Research on Cancer (IARC) as carcinogenic to humans (Group 1).

Long Term effects

Long term occupational over-exposure or prolonged inhalation of respirable crystalline silica dust at levels above the WES carries the risk of causing serious and irreversible lung disease, including bronchitis, scarring of the lung (silicosis). It may also increase the risk of other irreversible and serious disorders including scleroderma (a disease affecting the skin, joints, blood vessels and internal organs) and other auto-immune disorders.

Special toxic effects - Inhalation of dust including crystalline silica dust is considered by medical authorities to increase the risk of lung disease due to tobacco smoking

Section 12: Ecological Information

Ecotoxicity:	quarry products are non-toxic to aquatic and terrestrial organisms, are not biodegradable and pose no ecology risk
Mobility:	A low mobility would be expected in a landfill situation
Persistence & Degradability:	Product is persistent and would have a low degradability
Dust:	Crystalline silica is non toxic to aquatic and terrestrial organisms; is not biodegradable; is insoluble and is expected to have low mobility in landfill

Section 13: Disposal considerations

- Take measures to prevent dust generation
- Quarry products may be disposed in local landfill in accordance with local authority guidelines; recycling into construction activities is usually a practical alternative
- Can be disposed of as a common waste
- Use/wear sufficient respiratory protection; wet spilled material with water to avoid airborne dust
- Crystalline silica in common forms can be treated as common waste for disposal and can be dumped in landfill site in accordance with local authority guidelines

Section 14: Transport

UN Proper Shipping Name:	None allocated	UN Number:	None allocated
Class	None allocated	DG Class:	None allocated
Subsidiary Risk 1	None allocated	Packing Group:	None allocated
Hazchem Code:	None allocated	Special precautions for users:	See above

Transport is generally by mechanical equipment readily available in the industry. Transport equipment should be strong enough to contain a fluid with an effective specific gravity of 2.5

Section 15: Regulatory information

Exposure by inhalation to high levels of dust may be regulated under the Hazardous Substances Regulations as they apply to Respirable Crystalline Silica, requiring exposure assessment and control of inhalation exposure below the WES

Persons who have potential for exposure above the WES may be required by Regulations to have periodic health surveillance.

Other Information

This SDS is applicable: in Australia
SDS issue date: January 2022

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SDS review: The information in this Safety Data Sheet (SDS) is issued in accordance with the Australian Safety and Compensation Commission (ASCC). The SDS must not be altered, deleted or added to. Barro Group will not accept any responsibility for any changes made to its SDS by any other person or organisation.

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END of SDS