



Conundrum Holdings Pty Ltd
SAFETY DATA SHEET
Quarry and Sand Products

SECTION 1: IDENTIFICATION: OF THE MATERIAL AND SUPPLIER

Product Name: Quarry and Sand Products
Other Names: Crushed Rock, Road Base, Crushed Concrete, Aggregate, Blue Metal, Rail Ballast, Rip Rap, Beaching Material, Fill, Quarry Dust, Quartz Sand, Concrete Sand.
Recommended Use: Quarry and sand products are used in building and construction projects including road making, rail ballast and concrete.
Company: Conundrum Holdings Pty Ltd
ABN 39 007 076 020
Address: PO Box 100, Kilmore, VIC 3764
Telephone: 03 5781 0103 (7:30am to 5:00pm Mon to Fri only)
Facsimile: 03 5782 0188 (7:30am to 5:00pm Mon to Fri only)
Emergency Phone Number: Poisons Information Centre 13 11 26

SECTION 2: HAZARD(S) IDENTIFICATION

HAZARDOUS SUBSTANCE NON-DANGEROUS GOODS

This product may contain crystalline silica. Crystalline silica dust is classified as **Hazardous** according to Safe Work Australia formerly the Australian Safety and Compensation Council (ASCC) (Approved Criteria for Classifying Hazardous Substances [NOHSC:1008] 3rd Edition).

- Dust in/on the supplied product or created when the product is cut, drilled, abraded, or crushed may contain crystalline silica some of which may be respirable (small enough to reach deep into the lungs when breathed in).

Warnings using Safe Work Australia Criteria

Risk Phrases: **R20:** Harmful by inhalation (applies to dust).
R48: Danger of serious damage to health by prolonged exposure through inhalation (applies to dust).
Safety Phrases: **S22:** Do not breathe dust.

EMERGENCY OVERVIEW HAZARD

Globally Harmonised System of Classification and Labelling of Chemicals (GHS) Classification



Eye Irritation Category 2B, Organ Damage Category 2

Warnings using the GHS criteria

H332 Harmful if inhaled.

H350i May cause cancer by inhalation.

H372 Causes damage to organs (lungs) through prolonged or repeated exposure if inhaled.

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Conundrum Holdings Pty Ltd
SAFETY DATA SHEET
Quarry and Sand Products

PRECAUTIONARY STATEMENTS

Prevention

P261 Avoid breathing dust/fume/gas/mist/vapour spray.

Response

P304 + P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call doctor/physician if you feel unwell.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	Proportion (w/w):	CAS Number:
Crystalline Silica (SiO₂)	see below	14808-60-7
Basalt (Northern Quarries)	up to 0.2%	
Basalt (North Central Quarry)	up to 0.2%	
Hornfels (Stawell Quarry)	up to 74%	
Quartzite (McKenzie Creek Quarry)	up to 98%	

NB: Crystalline silica content may vary slightly from the above figures.

Other Ingredients determined not to be hazardous (balance) Not required

- Stabilized crushed rocks are made by blending quarry materials with up to 5% of Ordinary Portland Cement (CAS Number 65997-15-1).
- Some material sold as quarry products are made from recycled by-products from building/pavement demolition and wash out waste from concrete operations. Imported materials must comply with EPA regulations for waste classifications before being recycled.
- Depending on the source materials, the crystalline silica content of any particular quarry product can range from 0 to 100%.
- A crystalline silica substance is defined in the Occupational Health and Safety Amendment (Crystalline Silica) Regulations 2021 as a substance that contains greater than 1% crystalline silica.

SECTION 4: FIRST AID MEASURES

Swallowed: Rinse mouth and lips with water. Do not induce vomiting. If symptoms persist, seek medical attention.

Eye: Flush thoroughly with flowing water, while holding eyelids open. If symptoms such as irritation or redness persist, seek medical attention.

Skin: Remove heavily contaminated clothing. Wash off skin thoroughly with water. Use a mild soap if available. Shower if necessary. Seek medical attention for persistent irritation of the skin.

Inhaled: Remove to fresh air, away from dusty area. If respiratory irritation occurs, seek immediate medical attention.

First Aid Facilities: Eye wash station and normal wash-room facilities.

Advice to Doctor: Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Flammability: Not flammable or combustible.

Hazards from combustion products: None.

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Page 2 of 6

PD 1263 Form: 0203



Conundrum Holdings Pty Ltd
SAFETY DATA SHEET
Quarry and Sand Products

Suitable extinguishing media: Not applicable.

Special protective precautions and equipment for fire fighters: None.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spills: Dust is best cleaned up by vacuum device to avoid making dust airborne. If spillage is to be swept or shoveled into containers, it should be wetted down with water to reduce dust generation.

Recommendations on exposure control and personal protection should be followed during spill clean-up.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid breathing dust. Respirable dusts can be generated during processing, handling and storage. Use control measures such as ventilation, enclosure of materials, covered loads on trucks, and wetting down material while in use and PPE.

Storage: When stockpiling and handling large quantities of quarry or sand products, care should be taken to avoid steep faces on the stockpile, which can fall without warning.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards: **Safe Work Australia formally ASCC and National Occupational Exposure Standard (NES)**

Crystalline Silica (Quartz): 0.05mg/m³ time weighted average (TWA) as respirable dust.

Airborne concentration of respirable crystalline silica that exceeds half the exposure standard (0.02mg/m³) for respirable crystalline silica, performed in connection with a crystalline silica process is deemed *High Risk Crystalline Silica Work*.

Total dust (of any type, or particle size): 10 mg/m³ TWA.

Dust must be kept to a minimum to ensure respirable dust level remains below NES.

Engineering Controls: Avoid generating dust. Any activities which may generate dust must be performed in a well-ventilated space. Mechanical ventilation or local exhaust ventilation must be used if levels of respirable dust approach the NES. If dust generation cannot be avoided, personal respiratory protection is required.

Personal Protective Equipment:

Skin: Ensure a high level of personal hygiene is maintained when using this product. That is; always wash hands before eating, drinking, smoking or using the toilet.

Wear loose comfortable clothing and gloves (standard duty leather or equivalent compliant to AS/NZS 2161). Remove all contaminated clothing. Wash clothes regularly and separate from other clothes. Do not contaminate the home environment with dusty work clothes and shoes. Do not shake out work clothes before laundering.

Eyes: Safety goggles or splash resistant spectacles (compliant to AS/NZS 1337) or a face shield must be worn.



Conundrum Holdings Pty Ltd
SAFETY DATA SHEET
Quarry and Sand Products

Respiratory:

Where engineering and handling controls are not enough to minimize exposure to total dust and to respirable crystalline silica, personal respiratory protection must be worn. Respiratory protection used must conform to AS/NZS 1716 and be used in accordance with AS/NZS 1715. An approved particulate "dust mask" either class P1 or P2, may provide the required minimum protection factor for the ambient dust level in most cases. Where high levels of dust are encountered, more efficient cartridge-type or powered air protection respirator (PAPR) may be necessary. Use only respirators that bear the Australian Standards mark and are fitted and maintained accordingly.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colour range: White/grey to dark blue/grey Size range: Greater than 100mm to dust/sand
Odour:	Normally no odour
pH:	4.0 – 10.8 (only when wet)
Vapour Pressure:	Not determined
Vapour Pressure:	Not determined
Boiling Point/Range:	Not determined
Freezing/Melting Point:	Not determined
Solubility:	Insoluble
Density:	2.5 - 2.7 t/m ³
Flash Point:	Not applicable
Flammability Limits:	Not applicable
Ignition Temperature:	Not applicable
Particle Size:	A <i>proportion</i> of the dust may be respirable (below 10µm) and if it becomes airborne constitutes an exposure if inhaled.

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Chemically stable
Conditions to Avoid:	Dust generation
Incompatible Materials:	None
Hazardous Decomposition Products:	None
Hazardous Reactions:	None

SECTION 11: TOXICOLOGICAL INFORMATION

Health Effects:

Short Term (Acute) Exposure:

- Swallowed:** Unlikely to occur under normal conditions of use. Swallowing of dust may cause abdominal discomfort.
- Eyes:** Dust is irritating to the eyes, causing watering and redness. Exposure to dust may aggravate pre-existing eye conditions.
- Skin:** Dust may be mildly irritating and abrasive to the skin due to its physical properties.
- Inhaled:** Dust is mildly irritating to the nose, throat and lungs, resulting in coughing and sneezing. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated.



Conundrum Holdings Pty Ltd
SAFETY DATA SHEET
Quarry and Sand Products

Long Term (Chronic) Exposure:

- Eyes:** Dust may cause irritation and inflammation of the eyes and aggravate pre-existing eye conditions.
- Skin:** Repeated heavy contact with dust may cause drying of the skin and can result in a rash (irritant contact dermatitis) typically affecting the hands. Over time this may become chronic and can also become infected.
- Inhaled:** Repeated exposure to dust may result in increased nasal and respiratory secretions and coughing. High level exposures can increase the risk of bronchitis and pneumonia. Repeated inhalation of dust containing crystalline silica may result in an irreversible pulmonary fibrosis (scarring of the lung) termed silicosis, including acute or accelerated silicosis. Secondary infections such as bronchitis and tuberculosis are often associated with silicosis. It may also increase the risk of scleroderma (a disease affecting the skin, joints, blood vessels and internal organs) and other auto-immune disorders. Tobacco smoking is considered to increase the adverse effects of exposure to dust, including crystalline silica.
- Safe Work Australia classifies crystalline silica as a Hazardous Substance. Crystalline silica is recognised as a carcinogen by the International Agency for Research for Cancer (IARC).

SECTION 12: ECOLOGICAL INFORMATION

- Ecotoxicity:** Quarry products pose no ecological risk. They are non-toxic to aquatic and terrestrial organisms and are biodegradable.
- Persistence and Degradability:** Quarry products are persistent and are non-degradable.
- Mobility:** Low mobility would be expected in a landfill situation.

SECTION 13: DISPOSAL CONSIDERATIONS

- Disposal:** Quarry and sand products can be treated as a common waste for disposal or dumped into a landfill site in accordance with local authority guidelines. Measures should be taken to avoid dust generation during disposal and exposure and personal precautions should be observed (see above).

SECTION 14: TRANSPORT INFORMATION

- UN Number:** None allocated
- UN Proper Shipping Name:** None allocated
- Class and Subsidiary Risk:** None allocated
- Packing Group:** None allocated
- Special Precautions for User:** See above
- HAZCHEM Code:** None allocated

SECTION 15: REGULATORY INFORMATION

- Crystalline silica dust is classified as **Hazardous** according to Safe Work Australia formerly the ASCC (Approved Criteria for Classifying Hazardous Substances [NOHSC:1008] 3rd Edition).
- Crystalline silica is also recognised as a carcinogen by the IARC.
- Persons who have potential for exposure above the NES are required by Regulations to have periodic health surveillance including Chest X-ray (see Occupational Health and Safety Regulations (Victoria) 2017, World Health and Safety (WHS) Regulations or other relevant local State Government Regulations).



Conundrum Holdings Pty Ltd
SAFETY DATA SHEET
Quarry and Sand Products

SECTION 16: OTHER INFORMATION

- Smoking and other airborne particles: Inhalation of airborne particles from other sources of work, as well as those from tobacco smoking increases the risk of occupational respiratory diseases. It is recommended that all storage and work areas should be smoke-free zones and that other airborne contaminants are kept to a minimum.

References:

Australian Standards:

AS/NZS 1337: Eye Protectors for Industrial Applications.

AS/NZS 1715: Selection, Use and Maintenance of Respiratory Protective Devices.

AS/NZS 1716: Respiratory Protective Devices.

AS/NZS 2161: Occupational Protective Gloves.

Other:

Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals.

Guidance on the Classification of Hazardous Chemicals under the WHS Regulations.

Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)] *3rd Edition*.

Workplace Exposure Standards for Airborne Contaminants December 2019.

Occupational Health and Safety Act 2004.

Occupational Health and Safety Regulations (Victoria) 2017.

Occupational Health and Safety Amendment (Crystalline Silica) Regulations 2021.

NOTICE: At the date of publication the information contained in this Safety Data Sheet is, to the best of our knowledge, accurate and is given in good faith but no warranty expressed or implied is made. The suggested procedures are not necessarily all inclusive nor fully adequate for all circumstances in which the product may be used. Users are advised to make their own determination as to the suitability of the information in relation to their particular purposes and specific circumstances. We accept no responsibility for any resultant loss or damage as a result of any person acting or refraining from action as a result of the information provided in this document as it may be applied under conditions beyond our control. Where the information provided discloses a potential hazard or hazardous ingredient, adequate warning should be provided to employees and users and appropriate precautions taken to ensure safe systems of work are in place.

END OF SAFETY DATA SHEET