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, 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 contains crystalline silica. Crystalline silica dust is classified as **Hazardous** according to criteria of Safe Work Australia (formerly ASCC/ NOHSC) (Approved Criteria for Classifying Hazardous Substances [NOHSC:1008]).

- 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

GHS Classification

Eye Irritation Category 2B, Organ Damage Category 2

Warnings using the GHS criteria

H332 Harmful if inhaled

H373 may cause damage to organs via exposure to inhalation

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 as a result of exposure to the product

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	**Proportion (w/w):**	**CAS Number:**
Crystalline Silica ($Si0_2$)	**see below**	**14808-60-7**
Basalt (Northern Quarries)	up to 0.2%	
Hornfels (Stawell Quarry)	up to 74%	
Quartzite (McKenzie Creek Quarry)	up to 98%	
Quartz Sand	up to 99%	
Other Ingredients determined not to be hazardous	**(balance)**	**Not required**

- Stabilized crushed rocks are made by blending quarry materials with up to 4% of ordinary Portland Cement (CAS Number 65997-15-1). Refer to individual product MSDS for safety in relation to this.
- Some material sold as quarry products are made from recycled by-products from building/pavement demolition and wash out waste from concrete operations. These products do not contain asbestos.
- Depending on the source materials, the Crystalline Silica content of any particular quarry product can range from 0 to 100%.
- Products such as sand may be added to quarry products as declared on the delivery docket. Refer to individual product MSDS for safety information in relation to these admixtures.

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 to remove all traces. 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
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.

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** (formerly ASCC/ NOHSC) **National Occupational Exposure Standard (NES)**

Crystalline Silica (Quartz): 0.1 mg/m^3 time weighted average (TWA) as respirable dust

Total dust (of any type, or particle size): 10 mg/m^3 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 spectacles (compliant to AS/NZS 1337) should be worn if exposed to dust.

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 respirators or supplied-air helmets 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
Particle Density:	2.30 - 2.74 t/m^3
Bulk Density:	1.27 - 1.67 t/m^3
Flash Point:	Not applicable
Flammability Limits:	Not applicable
Ignition Temperature:	Not applicable
Particle Size:	A *proportion* 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.

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. The most current research indicates no excess risk of lung cancer or other cancers from using these products. 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 ASCC/ NOHSC) (Approved Criteria for Classifying Hazardous Substances [NOHSC:1008]).
- Crystalline silica is also recognized as a carcinogen by the International Agency for Research for Cancer (IARC).

- Persons who have potential for exposure above the NES is required by Regulations to have periodic health surveillance including chest x-ray (see Occupational Health and Safety Regulations (Victoria) 2007, WHS Regulations or other relevant local State Government Regulations).

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:

National Code of Practice for the preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)], National Occupational Health and Safety Commission, 2003

Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)], National Occupational Health and Safety Commission, 2004

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)], National Occupational Health and Safety Commission, 1995

Occupational Health and Safety Regulations, 2007 State of Victoria, 2007

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 (Material) Safety Data Sheet