

Material Safety Data Sheet

SECTION 1 – IDENTIFICATION

Supplier/Manufacturer: (Correspondence address)	Alliance Construction Materials Limited Room 1901A, One Harbourfront, 18 Tak Fung Street, Hung Hom, Kowloon, Hong Kong.
Product :	Aggregates, Road Base, Crushed Rock Fine (CRF) and Fill
Other Names/Synonyms :	Gravel, Fill, Road Base
Use :	Quarry products are used in building construction and other civil engineering activities such as road building
Other Information :	NA

SECTION 2 – HAZARDS IDENTIFICATION

Hazardous Substance : Non-dangerous goods

This product may contain crystalline silica. Prolonged or repeated exposure may cause or aggravate other lung conditions

- The solid product as supplied is classified as non-hazardous
- Dust in/on the supplied product or created when the product is cut, 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)
- A proportion of the fine dust in/on the supplied product may be respirable crystalline silica

The following Risk and Safety phrases apply to this product

Risk Phrases:

- ✧ Harmful by inhalation (Applies to dust)
- ✧ Harmful if Swallowed
- ✧ Danger of serious damage to health by prolonged exposure through inhalation (Applies to dust)

Safety Phrases:

- ✧ Do not breathe dust

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

All significant constituents are listed below:

Major Ingredients

<u>Item</u>	<u>Ingredient</u>	<u>CAS No.</u>	<u>Proportion</u>
01	Fine (Containing Crystalline Silica)	14808-60-7	0 – 100%
02	Crushed Stone, Gravel	Not required	0 – 100%

Note: These are naturally occurring materials excavated and processed at hard rock quarries. Depending on the source the Crystalline Silica content of any particular quarry product can range from 0 to 100%

SECTION 4 – FIRST AID MEASURES

- Ingestion: Rinse mouth and lips with water. Do not induce vomiting. If symptoms persist, seek medical attention
- Eye contact: Rinse thoroughly with water, while holding eyelids open, for 15 minutes to remove all traces. If symptoms such as irritation or redness persist, seek medical attention.
- Skin contact: Remove heavily contaminated clothing. Wash off skin thoroughly with soap and water; shower if necessary and use moisturizing creams for irritated skin. Seek medical attention for persistent redness, irritation or burning of the skin.
- Inhalation: Remove the source of contamination or move person to fresh air. Ensure airways are clear and have a qualified person give oxygen through a face mask if breathing is difficult. If irritation persists seek medical attention.

First Aid Facilities Eye wash and normal washroom facilities

SECTION 5 – FIRE & EXPLOSION DATA

Flash Point:	None
Flammable Limit:	Not combustible
Lower Explosive Limit:	None
Upper Explosive Limit:	None
Extinguishing Media:	Not combustible
Fire Fighting Instruction:	Treat adjacent materials
Hazardous Combustion Products:	None
Unusual Fire & Explosion Hazards:	None

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills:

- Dust is best cleaned up by vacuum device to avoid making dust airborne. Wetting down before sweeping up dust may be a useful control measure
- Collect dry material using a scoop. Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with skin.
- Recommendations on Exposure Controls / Personal Protection (see Section 8 below) should be followed during spill clean-up if conditions are dusty
- Wear appropriate personal protective equipment as described in Section 8.

SECTION 7 – HANDLING & STORAGE

Storage Precautions No special storage requirements

Transport Not classified as a Dangerous Goods, according to **Cap 295B DANGEROUS GOODS (GENERAL) REGULATIONS** of HKSAR

SECTION 8 – EXPOSURE CONTROL & PERSONAL PROTECTION

The following applies to dust from this product:

Exposure Limits:

Occupational Safety and Health Branch Labour Department of HKSAR

Exposure to dust should be kept as low as practicable, and below the following OEL.

Crystalline Silica <i>(respirable dust)</i>	OEL-TWA (mg/m ³)
Cristobalite	0.05
Quartz	0.1
Tridymite	0.05

Crystalline silica (quartz): 0.1 mg/m³ TWA (time –weighted average) as respirable dust

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

Engineering Controls:

All work should be carried out in such a way as to minimise dust generation, and exposure to dust.

Mechanical ventilation: Dust extraction and collection may be used, if necessary, to control airborne dust levels

Work areas should be cleaned regularly

Personal Protection:

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

Remove all contaminated clothing. Wash gently and thoroughly with tepid water and non-abrasive soap. If irritation develops and persists seek medical attention

Eyes: Safety glasses with side shields or safety goggles or a face shield should be worn

Respiratory: Where engineering and handling controls are not enough to minimise exposure to total dust and to respirable crystalline silica, personal respiratory protection may be required. The type of respiratory protection required depends primarily on the concentration of the respirable crystalline silica dust in the air, and the frequency and length of exposure time. Amount of exertion required during the work, and personal comfort are other considerations in choice of respirator. A suitable particulate respirator chosen and used in accordance with Guidance Notes on Personal Protective Equipment (PPE) published by Labour Department of HKSAR may be sufficient for many situations, but where high levels of dust are encountered, more efficient cartridge type or powered respirators or supplied-air helmets or suits may be necessary. For dust levels approaching or exceeding the NES (see above) a more effective particulate respirator providing a greater protection factor should be worn. Procedures for effective use of respirators should be applied and supervised. Do not contaminate the home environment with dusty work clothes and shoes. Do not shake out work clothes before laundering

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance	May range from fine grains (CRF) to large rock (aggregate/road base)
Physical State	Solid
Odor	No distinct odor
pH(in water)	3.0 – 10.0
Vapor Pressure	Not determined
Vapor Density	Not determined
Boiling Point	Not determined
Freezing/melting Point	Not determined
Solubility in Water	Not soluble
Specific Gravity (H ₂ O = 1)	2.2 – 2.7
Flash Point	Not applicable
Upper and lower flammability Limits	Not applicable
Ignition Temp	Not applicable
Particle Size	A proportion of the dust may be respirable (below 10microns) and if it becomes airborne constitutes an exposure if inhaled

SECTION 10 – STABILITY & REACTIVITY

Chemical Stability:	Chemically Stable
Condition to avoid:	Dust generation
Incompatible materials:	None
Hazardous Decomposition:	None
Products Hazardous	
Reactions:	None

SECTION 11 – TOXICOLOGICAL INFORMATION

Health Effects**Acute (short term)-**

Swallowed	Unlikely under normal industrial use. Mildly abrasive to mouth and throat if swallowed
Eye	Dust is irritating to the eyes. Exposure to dust may aggravate pre-existing eye conditions
Skin	Dust may be mildly irritating and drying to the skin due to its physical characteristics
Inhaled	Dust is mildly irritating to the nose, throat and respiratory tract and may cause coughing and sneezing. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated

Chronic (long term) -

Eyes	Dust may cause irritation and inflammation of the eyes and aggravate pre-existing eye conditions
Skin	Repeated heavy contact with the dust may cause drying of the skin and can result in skin rash (dermatitis) typically affecting the hands. Over time this may become chronic and can also become infected
Inhaled	Repeated exposure to the 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. Long term occupational over-exposure or prolonged breathing-in (or inhalation) of crystalline silica dust at levels above the NES carries the risk of causing serious and irreversible lung disease, including bronchitis, and silicosis (scarring of the lung), including acute and/or accelerated 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. Inhalation of dust, including crystalline silica dust, is considered by medical authorities to increase the risk of lung disease due to tobacco smoking. The product contains a proportion of respirable free crystalline silica in the quartz component. Crystalline silica (inhaled in the form of quartz or cristobalite from occupational sources) has been classified by The International Agency for Research on Cancer (IARC) as carcinogenic to humans (Group 1). However (in the view of CC&AA) the research on this is inconclusive and ASCC/NOHSC has not classified crystalline silica as a carcinogen The most current research indicates no excess risk of lung cancer or other cancers from using these products
Other Information	Inhalation of airborne particles from other sources in the work environment, including those from cigarette smoke, may increase 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

SECTION 12 – ECOLOGICAL INFORMATION

No recognized unusual toxicity to plants or animals.

SECTION 13 – DISPOSAL

Disposal of waste material according to local regulations.

SECTION 14 – TRANSPORTATION DATA

Not a hazardous material and no transportation information required.

SECTION 15 – OTHER INFORMATION

Crystalline silica is classified as non-Dangerous Goods according to Cap 295B DANGEROUS GOODS (GENERAL) REGULATIONS of HKSAR.

Crystalline silica in the form of respirable dust is classified as Hazardous according to the Guidance Notes on Protection of Quarry and Construction Workers from Silicosis.