

Holcim Aggregate Products

1. Identification

Product Names: Holcim Aggregate Products

UN Number: Not Applicable

Other names: Railway Ballast, Aggregates (Concrete), Road Base, Quarry Sand, Fill, Gravel.

Proper Shipping Name: Not Applicable

Recommended Use: Aggregates products are used as raw materials for concrete, masonry and asphalt and as base materials for roads and residential and commercial building, civil engineering and construction projects.

Supplier:

Phone: 0800 HOLCIM (465 246)

Name: Holcim NZ Ltd

Website: www.holcim.co.nz

Address: Unit 1, Show Place,
Addington
Christchurch, 8024

Emergency Contacts: Emergency Services (Fire, Ambulance, Police) – Dial 111
National Poisons Information Centre – 0800 764 766 (0800 POISON)
Company Contact – 0800 HOLCIM (465 246)

2. Hazard Identification

Statement of Hazardous Nature:

This product is classified as hazardous according to the criteria of the *Hazardous Substances (Hazard Classification) Notice 2020*.
Not classified as a Dangerous Good according to NZS 5433.

Hazard Classification:

Carcinogenicity category 1
Specific organ toxicity – repeated exposure category 1

Prevention Statements:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust.
Wear protective gloves and eye / face protection.
Wear protective clothing and respiratory protection.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.

Hazard Statements:



Danger

May cause cancer by inhalation.
Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation).

3. Composition & Information on Ingredients

Ingredient	CAS Number	Concentration (%)
Aggregate containing crystalline silica (quartz) % of crystalline silica in aggregate	14808-60-7	25% 0.1 to 100%
Aggregate containing feldspars epidote, chlorite, calcite, sphenechlorite, pyroxene and limonite	-	70%

Notes:

- Holcim Aggregate Products are mostly supplied from naturally occurring materials excavated and processed at sand pits, gravel pits and hard rock quarries. Dependent on quarry location, the rock type can be described as meta-dolerite, amphibolite, granite with dolerite dykes or greenstone consisting of varying concentrations of actinolite, epidote, feldspar,

SAFETY DATA SHEET: Holcim Aggregate Products

chlorite, calcite, sphene, chlorite, pyroxene and limonite, as well as alluvial sands, soils and loams, trachyte, andesite, rhyolite and diorite. Natural rock dolerite aggregates may contain traces (<0.01% by weight) of fibrous actinolite. Depending upon the source materials, the crystalline silica (quartz) content of any particular quarry product can vary from trace amounts up to 100%.

Some quarry products (particularly roadbase products) are made by blending materials from two or more pits and quarries in order to meet the required physical properties or customer specification. Some materials sold as quarry products are made by recycling by-products from other industries such as reprocessing concrete from building demolition and slag from blast furnaces that produce iron and steel. Aggregates for road sealing are often precoated with a mixture of bitumen and diesel fuel prior to use, either prior to delivery from the quarry or later at a roadside stockpile.

- Crystalline Silica (quartz) in respirable form is a known or presumed human carcinogen, and EPA CCID includes the following statement:

"EXPERT JUDGEMENT: This substance only triggers 6.7A if it is in the form of a fine respirable dust in an occupational (chronic exposure) setting.

Note: This substance is non hazardous if it is not a fine respirable dust."

4. First Aid Measures

New Zealand Poisons & Hazardous Chemicals National
Information Centre
phone 0800 POISON – 0800 764 766

Skin: IF ON 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 or burning of the skin.

Eyes: IF IN EYES: Rinse cautiously with water for several minutes to remove all traces. Remove contact lenses, if present. Continue rinsing. Do not attempt to remove solid particles embedded in the eye. If symptoms such as irritation or redness persist, seek medical attention.

Ingestion: IF SWALLOWED, rinse mouth and lips with water. Do NOT induce vomiting. If feeling unwell, seek medical attention.

Inhalation: IF INHALED: Remove person to fresh air, away from dusty area, and keep comfortable for breathing. Call a POISON CENTRE or doctor/physician if feeling unwell or experiencing breathing difficulties. If exposed or concerned, or if symptoms persist, seek medical attention.

Advice to Doctor: Treat symptomatically.

5. Fire Fighting Measures

Flammability: Non-flammable.

Extinguishing media: Use appropriate for surrounding materials.

Hazardous Combustion products: Carbon and nitrogen oxides may be formed.

Fire Fighting Instructions: Treat as per requirements for surrounding fires. Evacuate area and contact emergency

services. Fight fire from safe distance and protected location. Approach from upwind.

Fire fighters should wear approved self-contained breathing apparatus and full protective clothing.

Prevent contamination to enter drains or water ways

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Recommendations on exposure controls / personal protection (see Section 8 below) should be followed during spill clean-up if conditions are dusty.

Spills: Collect spill by wet sweeping or an industrial vacuum cleaner with filters suitable for this product to ensure minimal airborne dust generation. Do not use compressed air.

Wetting down before sweeping up spill may be a useful control measure.

Collect and place in sealable containers for disposal in accordance with section 13, or reuse product, if possible.

Prevent spill from entering storm water/ sewer drains and watercourses.

7. Handling & Storage

Safe Handling

Before use carefully read the product label.

Do not breathe dust. Respirable dusts can be generated during processing, handling, and storage.

Use of safe work practices are recommended to avoid eye or skin contact. Wear protective gloves and eye/face protection.

Observe good personal hygiene, including washing hands before eating.

Prohibit eating, drinking and smoking in work areas.

Certified Handler: Not required

Storage

When stockpiling and handling large quantities of products, care should be taken to avoid having the faces of the stockpile steeper than the natural angle of repose of the material. Steep faces can fall without warning and trap people resulting in injury and possibly suffocation. Store locked up – restrict access to bulk storage areas. If required keep bulk storage areas wet to reduce dust generation.

8. Exposure Controls & Personal Protection

Exposure Standards

Workplace Exposure Standards (WES):

Ingredient	CAS Number	TWA	STEL
Silica-crystalline (all forms)	-	0.025 mg/m ³ (respirable)	-
Particulates/dust not otherwise classified	-	10 mg/m ³ (inhalable) 3 mg/m ³ (respirable)	-

Data source: *Workplace Exposure Standards and Biological Indices (14th Edition, Nov 2023, WorkSafe)*

Biological Exposure Indices (BEI): No biological exposure indices have been set for this product or its ingredients.

Engineering Controls

Ventilation: Ensure adequate ventilation – optimise natural airflows and keep out of enclosed spaces (work in the open air where possible). The products should be made damp before use to minimise dust generation. Local mechanical ventilation or extraction may be required in areas where dust could escape into the working environment. Local dust extraction and collection may be used, if necessary, to control airborne dust levels. If generated dust cannot be avoided, follow personal protection recommendations.

Personal Protection (PPE)

Use personal protective equipment as required.

Eyes/Face: Use tight fitting goggles or safety glasses with side shields in dusty environments. Eye protection must comply with AS/NZS 1337.

Skin: Wear loose, comfortable clothing and gloves (standard duty leather or equivalent in accordance with AS/NZS 2161).

Respiratory: None required if engineering and handling controls are adequate to minimize dust generation and dust exposure (e.g. products kept damp). Where engineering and handling controls are not enough to minimise exposure to dust, personal respiratory protection may be required.

The type of respiratory protection required depends primarily on the concentration of the inhalable and respirable dust in the air, and the frequency and length of exposure time. A suitable P2 particulate respirator chosen and used in accordance with AS/NZS 1715 and AS/NZS 1716) may be sufficient for many situations. For respiratory protection to be effective there needs to be a good facial seal of the respirator. The worker should be clean shaven, and the respirator fit tested. Fit Checks should be carried out each time a respirator is worn.

However, where high levels of dust are encountered, more efficient cartridge-types (e.g. full-face respirator fitted with P2 filters or powered air purifying respirators or supplied-air helmets) may be necessary. Use only respirators that bear the Australian Standards mark and are fitted and maintained correctly. Dust control measures providing respiratory protection against crystalline silica dust will also minimise exposure to other respirable dusts.

9. Physical & Chemical Properties

Appearance: The products are typically blue/grey in colour, but may also vary to brown, green, cream and white, depending upon source material. Shape and texture can vary from smooth and rounded to angular and rough.

Odour: No odour.

Odour threshold: No data available.

pH: No data available.

Boiling point: Not applicable.

Melting point: Not applicable.

Flash point: Not applicable.

Autoignition Temp: Not applicable.

Decomposition Temp: No data available.

Flammability: Non-flammable.

Lower Flammability Limit (LEL): Not applicable.

Upper Flammability Limit (UEL): Not applicable.

Vapour pressure: Not applicable.

Vapour density (Air =1): No data available.

Specific gravity (water=1): 2.0 – 3.0 g/cm³

Solubility (water): Insoluble.

Viscosity (dynamic): Not applicable

Viscosity (kinematic): No data available.

Evaporation rate: Not applicable.

Partition coefficient (n-octanol/water): No data available.

10. Stability & Reactivity

Stability: Stable under normal conditions of use and storage.

Reactivity: No data available.

Conditions to avoid: Dust generation.

Incompatible Materials: None specified.

Hazardous decomposition products: None specified.

Hazardous polymerisation: Does not occur.

11. Toxicological Information

Health Effects / Symptoms of Exposure

Acute Exposure (short term)

Inhalation: Dust is mildly irritating to 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.

Skin: Dust may be mildly irritating and drying to the skin, or abrasive, due to its physical characteristics.

Eyes: Direct contact with dust is irritating and may cause redness and watering. Exposure to dust may aggravate pre-existing eye conditions.

Ingestion: Not an expected route of entry under normal industrial use. Mildly abrasive to mouth and throat if swallowed.

Aspiration hazard: Not classified.

Chronic Exposure (long term)

Respiratory or Skin sensitisation: Not classified.

Mutagenicity: Not classified.

Carcinogenicity: May cause cancer by inhalation.

Note: This product may contain varying amounts of crystalline silica which is classified as carcinogenic to humans (IARC Group 1).

Reproductive Toxicity: Not classified.

Specific Target Organ Toxicity (STOT): May cause damage to organs (lungs) through prolonged or repeated exposure through inhalation. Repeated exposure to dust may result in chronic inflammation of the respiratory system. Repeated exposure to crystalline silica may cause bronchitis, silicosis, and other respiratory disorders.

Additional notes

In some cases, the aggregate in this product may contain traces of fibrous actinolite material, which is a form of asbestos (asbestiform fibres). Excessive long-term exposures to asbestiform fibres can lead to mesothelioma, lung cancer and asbestosis. However, according to a statement from WA Government health authorities (14 November 2013):

"Exposure monitoring results gathered during air monitoring programs at quarries and mine sites show that the levels of exposure from airborne mineral fibres are below the national occupational exposure standard and therefore present a low health risk."

Long term occupational over-exposure or prolonged inhalation of crystalline silica dust at levels above the WES carries the risk of causing serious and irreversible lung disease, including bronchitis and silicosis (scarring of the lung). 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. IARC have recently classified respirable crystalline silica dust as carcinogenic to humans (IARC Group 1). This means it may cause lung cancer. In the case of generated dust, the recommended controls outlined in Section 8 should be followed.

Toxicological Data

No toxicological data available for the product or its ingredients.

12. Ecological Information

No specific toxicology data available, but toxicity of this product is anticipated to be very low with LD50 >5,000 mg/kg.

Health effects information is based on reported effects in use from overseas and Australian reports.

Persistence in environment: Product is persistent and has low degradability.

Mobility: Low mobility expected in a landfill situation.

Biodegradability: Product is not biodegradable.

Ecotoxicological Data

No data is available for this product as a whole or its ingredients.

13. Disposal Considerations

Dust from product is hazardous. However, *Aggregate Products* can be treated as a common waste for disposal and can be dumped into a landfill site in accordance with local authority guidelines. Recycling into construction activities is usually a practicable alternative. Measures should be taken to prevent dust generation during disposal and exposure and personal precautions should be observed (see above).

Do not allow into drains, sewers, or watercourses.

14. Transport Information

Not classified as a Dangerous Good according to NZS 5433:2020, UN Model Regulations, IATA and/or IMDG.

Proper Shipping Name: Not applicable.

UN Number: Not applicable.

DG Class: Not applicable.

Subsidiary Risk: Not applicable.

Packing Group: Not applicable.

Marine Pollutant: Not applicable.

15. Regulatory Information

HSNO Approval

Ingredients are listed in the NZIoC or it is a naturally occurring material.

HSNO Group Standard: Construction Products (Carcinogenic) Group Standard 2020

Approval Number: HSR002545

Health and Safety at Work (Hazardous Substances) Regulations

Location Certification: Not required.

Tracking: Not required.

Certified Handlers: Not Required.

Secondary containment: Not required (solid).

16. Other Information

Abbreviations / Terminology:

AS/NZS	Joint Australian New Zealand Standard
AS/NZS 1337	Personal eye-protection
AS/NZS 1715	Selection, use and maintenance of respiratory protective equipment
AS/NZS 1716	Respiratory protective devices
AS/NZS 2161	Occupational protective gloves
CAS #	Chemical Abstract Service number (a unique identifier for chemicals)
CCID	New Zealand Chemical Classification and Information Database
HSNO	(New Zealand) Hazardous Substances and New Organisms Act
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
LD ₅₀	Median lethal dose, being a statistically derived single dose of a substance that can be expected to cause death in 50 percent of animals.
NZIoC	New Zealand Inventory of Chemicals
NZS 5433	Transport of Dangerous Goods on Land
TWA	Time Weighted Average
STEL	Short Term Exposure Limit

Hazard Classification under GHS7:

Carcinogenicity category 1

Specific organ toxicity – repeated exposure category 1

Previous HSNO classes for reference only

6.7A

6.9A

Prepared with reference to:

- *Hazardous Substances (Safety Data Sheets) Notice 2017*, published by Environmental Protection Authority, New Zealand.

SDS may be revised from time to time, please ensure you have a current copy.

Current Version: 12 November 2024 (v3)

Revision Information: Updated existing SDS to meet NZ requirements and GHS 7 classifications.

Previous revision dated: 25 August 2020 (v2) and December 2019 (v1).

Disclaimer:

This safety data sheet attempts to describe as accurately as possible the potential exposures associated with normal use of the product described herein. Health and safety precautions in the data sheet may not be adequate for all individuals and/or situations. Users have the responsibility to evaluate and use this product safely and to comply with all applicable laws and regulations.

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