

# SAFETY DATA SHEET



Strength. Performance. Passion.

## *Holcim Recycled Aggregates*

### SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name:</b>	<b>Holcim Recycled Aggregates</b>
<b>Other Names:</b>	Recycled Aggregates 10mm 20mm (and other sizes)
<b>Recommended Use:</b>	Used as base foundation material in construction.
<b>Applicable In:</b>	Australia
<b>Supplier:</b>	Holcim (Australia) Pty Ltd ABN 87 099 732 297
<b>Address:</b>	Level 8, Tower B, 799 Pacific Hwy, Chatswood, NSW 2067, Australia
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<b>Facsimile:</b>	+61 2 9412 6601
<b>Website:</b>	www.holcim.com.au
<b>Emergency Phone Number:</b>	000 Fire Brigade and Police (available in Australia only)
<b>Poisons Information Centre:</b>	13 11 26 (available in Australia only)

This Safety Data Sheet (SDS) is issued by the Supplier in accordance with National standards and guidelines from Safe Work Australia (SWA – formerly ASCC/NOHSC). The information in it must not be altered, deleted or added to. The Supplier will not accept any responsibility for any changes made to its SDS by any other person or organization. The Supplier will issue a new SDS when there is a change in product specifications and/or Standards, Codes, Guidelines, or Regulations.

### SECTION 2: HAZARD IDENTIFICATION

**STATEMENT OF HAZARDOUS NATURE:** The product as supplied is classified as **non-Hazardous** according to the criteria of Safe Work Australia (SWA – formerly ASCC/NOHSC) Approved Criteria For Classifying Hazardous Substances [NOHSC:1008] 3rd Edition.

Dust in/on the supplied product, or created when the product is used or further 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 **Hazardous**. Recommendations on Exposure Controls / Personal Protection (see Section 8 below) should be followed.

**Recycled Aggregates** are classified as **Non-Dangerous** Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

#### GHS CLASSIFICATION:

**Not classified as Hazardous.** Because this product is classified as Non-Hazardous as delivered, a Safety Data Sheet (SDS) is not required under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) or Australian Regulations. Holcim has elected to issue this SDS for the information of users, installers and the community. It has been formatted according to the GHS, as adopted by Safe Work Australia.

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	Synonyms:	Proportion:	CAS Number:
Aggregate containing crystalline silica (quartz)	Sand, crushed stone, gravel, slag	>90%	14808-60-7
Portland cement		<10%	65997-15-1
Water		Approximately 2%	7732-18-5

#### Notes:

1. Holcim Recycled Aggregates Products is a combination of supplied naturally-occurring materials excavated and processed at sand pits, gravel pits and hard rock quarries, in addition to cementitious residues from recycled concrete, with mineral and organic traces.
2. 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, chlorite, calcite, sphenechlorite, pyroxene and limonite, as well as alluvial sands, soils and loams, trachyte, andesite, rhyolite and diorite.
3. Natural rock dolerite aggregates may contain traces (<0.01% by weight) of fibrous actinolite.
4. Depending upon the source materials, the crystalline silica (quartz) content of any particular quarry product can vary from trace amounts up to 100%.
5. Cement in concrete contains traces of Chromium VI (hexavalent) and cementitious additives may contain traces of other metals.

### SECTION 4: FIRST AID MEASURES

The following advice refers mainly to exposure to dust following processing of product.

<b>Swallowed:</b>	Rinse mouth and lips with water. Do not induce vomiting. If symptoms persist, seek medical attention.
<b>Eyes:</b>	Flush thoroughly with flowing water for 15 minutes to remove all traces. Do not attempt to remove solid particles embedded in the eye. If symptoms such as irritation or redness persist, seek medical attention.
<b>Skin:</b>	Remove heavily contaminated clothing immediately. 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.
<b>Inhaled:</b>	Remove to fresh air, away from dusty area. If symptoms persist, seek medical attention.
<b>Advice to Doctor:</b>	Treat symptomatically.

### SECTION 5: FIRE FIGHTING MEASURES

<b>Suitable extinguishing media:</b>	Use carbon dioxide, foam, dry chemical or water spray as required for fire in surrounding materials.
<b>Specific hazards:</b>	None
<b>Special protective equipment and precautions for firefighters:</b>	None
<b>HAZCHEM Code:</b>	None allocated

## SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures:</b>	Recommendations on Exposure Controls / Personal Protection (see Section 8 below) should be followed during spill clean-up if conditions are dusty.
<b>Environmental precautions:</b>	No specific precautions required.
<b>Methods and materials for containment and clean up:</b>	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.

## SECTION 7: HANDLING AND STORAGE

<b>Precautions for safe handling:</b>	Manual handling should be in accordance with Manual Handling Regulations and Codes. Avoid breathing dust. Respirable dusts can be generated during processing, handling, and storage.
<b>Conditions for safe storage:</b>	When stockpiling and handling large quantities of sand, 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 persons resulting in injury and possibly suffocation.
<b>Incompatibilities:</b>	None

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure Standards:</b>	<p><b>Workplace Exposure Standards for Airborne Contaminants, Safe Work Australia</b></p> <p>Crystalline silica (quartz): TWA – 0.1 mg/m<sup>3</sup> respirable dust. (≤ 7 microns particle equivalent aerodynamic diameter)</p> <p>Portland cement: TWA – 10 mg/m<sup>3</sup> as inspirable dust</p> <p>Total dust (of any type, or particle size): TWA – 10 mg/m<sup>3</sup></p> <p>Asbestos: TWA – 0.1 fibres/mL of air (fibrous actinolite is a form of asbestos)</p>
<b>Notes on Exposure Standards:</b>	<p>All occupational exposures to atmospheric contaminants should be kept to as low as reasonably practicable and in all cases to below the Workplace Exposure Standard (WES).</p> <p>TWA (Time Weighted Average): the time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.</p>
<b>Biological Limit Values:</b>	No biological limit allocated.
<b>ENGINEERING CONTROLS</b>	
<input type="checkbox"/> <b>Ventilation:</b>	Dust can be generated during processing, handling, and storage. Stockpiles and foundation beds, when dried out, can generate dust if disturbed. Dust can be minimized by wetting (surface spray), backfilling over or covering, or suppressing with oil-spray using standard techniques. Keep exposures to dust as low as practicable. Work in the open air, and the opening of external openings (such as doors and windows in buildings) generally provides adequate ventilation. Local mechanical ventilation or extraction may be required in areas where dust could escape into the working environment. If generated dust cannot be avoided follow personal protection recommendations.

<input type="checkbox"/> <b>Special Consideration for Repair &amp;/or Maintenance of Contaminated Equipment:</b>	Where practicable vacuum or wash down all gear, equipment or mobile plant prior to maintenance and repair work. If compressed air cleaning cannot be avoided, wear eye and respiratory protection, and clothing as listed below. Recommendations on Exposure Control and Personal Protection should be followed. When dust is present, ensure exposures to respirable crystalline silica (quartz) are maintained below WES.
<b>PERSONAL PROTECTION</b>	
<input type="checkbox"/> <b>Personal Hygiene:</b>	Wash hands before eating, drinking, using the toilet, or smoking. Wash work clothes regularly.
<input type="checkbox"/> <b>Skin Protection:</b>	Wear loose comfortable clothing and gloves (standard duty leather or equivalent AS 2161).
<input type="checkbox"/> <b>Eye Protection:</b>	Safety glasses with side shields or safety goggles (AS/NZ 1336) or a face shield should be worn.
<input type="checkbox"/> <b>Respiratory Protection:</b>	<p>None required if engineering and handling controls are adequate to minimize dust generation and dust exposure. Where engineering and handling controls are not enough to minimise exposure to dust, personal respiratory protection may be required.</p> <p>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. Amount of exertion required during the work, and personal comfort are other considerations in respirator choice. A suitable P1 or P2 particulate respirator chosen and used in accordance with AS/NZS 1715 and 1716 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. Use only respirators that bear the Australian Standards mark and are fitted and maintained correctly.</p> <p>Dust control measures providing respiratory protection against crystalline silica dust will also minimise and control any exposure to fibrous actinolite.</p>

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Coarse aggregate
<b>Odour:</b>	None
<b>Odour threshold:</b>	Not applicable
<b>pH:</b>	Approximately 7.4
<b>Melting point:</b>	Not applicable
<b>Initial boiling point and range:</b>	Not applicable
<b>Flash point:</b>	Not applicable
<b>Evaporation rate:</b>	Not applicable
<b>Flammability:</b>	Non-flammable; fire retardant
<b>Upper/lower flammability or explosive limits:</b>	Not applicable
<b>Vapour pressure:</b>	Not applicable
<b>Vapour density:</b>	Not applicable
<b>Specific gravity (Relative density):</b>	2.0 – 3.0
<b>Solubility:</b>	Insoluble

<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Viscosity:</b>	Not applicable
<b>Auto-ignition temperature:</b>	Not applicable
<b>Decomposition temperature:</b>	Not determined
<b>% Volatiles:</b>	0%
<b>Volatile Organic Compounds (VOC) Content:</b> (as specified by the Green Building Council of Australia)	0%

## SECTION 10: STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal conditions
<b>Hazardous Reactions:</b>	None
<b>Conditions to avoid:</b>	Dust generation
<b>Incompatible Materials:</b>	None
<b>Hazardous Decomposition Products:</b>	None

## SECTION 11: TOXICOLOGICAL INFORMATION

### Health Effects: Acute (short term)

<b>Swallowed:</b>	Unlikely under normal industrial use. Abrasive and irritant to mouth and throat.
<b>Eyes:</b>	Dust is irritating and may cause redness and watering. Exposure to dust may aggravate pre-existing eye conditions.
<b>Skin:</b>	Dust may be irritating and drying to the skin, or abrasive, due to its physical characteristics.
<b>Inhaled:</b>	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.

### Health Effects: Chronic (long term)

<b>Eyes:</b>	Dust may cause irritation and inflammation of the eyes and aggravate pre-existing eye conditions.
<b>Skin:</b>	Repeated contact causes irritation and drying of the skin and can result in skin reddening and skin rash (dermatitis) which may become persistent. Persons who are allergic to chromium may develop an allergic dermatitis. Where dermatitis becomes established secondary infection of the skin may occur.
<b>Inhaled:</b>	In dust form it may cause inflammation of lining tissue of the respiratory system. Repeated inhalation of dust containing crystalline silica can cause bronchitis, silicosis (scarring of the lung), and may increase the risk of other serious disorders including scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels and internal organs).

### Toxicity Data

No specific toxicology data available, but toxicity of this product is anticipated to be very low with LD50 >5,000mg/kg. Health effects information is based on reported effects in use from overseas and Australian reports.

## Additional Notes

<b>Long Term Effects:</b>	<p>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):</p> <p><i>"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."</i></p> <p>Long term occupational over-exposure or prolonged breathing-in (or 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 can cause lung cancer. In the case of generated dust, the recommended controls outlined in Section 8 should be followed.</p> <p>Following considerable research and consultation with Government authorities, Holcim considers low exposures to aggregate dust containing such traces are without risk to health.</p>
<b>Special Toxic Effects:</b>	<p>Inhalation of dust, including crystalline silica dust, is considered by medical authorities to increase the risk of lung disease due to tobacco smoking.</p>

## SECTION 12: ECOLOGICAL INFORMATION

<b>Eco-toxicity:</b>	Products as delivered are not biodegradable, have low eco-toxicity and are not regarded as posing any ecological risk. Crushed product and dust may form a mildly alkaline or neutral slurry when mixed with water.
<b>Persistence and Degradability:</b>	Product is persistent and would have a low degradability.
<b>Bioaccumulative potential:</b>	There is no evidence to suggest bioaccumulation will occur.
<b>Mobility in soil:</b>	A low mobility would be expected in a landfill situation.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Recycled Aggregates** can be treated as common waste for disposal or dumped into a landfill site in accordance with local authority guidelines. Keep out of storm water and sewer drains. Measures should be taken to prevent dust generation during disposal, and exposure and personal precautions should be observed (see above).

## SECTION 14: TRANSPORT INFORMATION

<b>UN number:</b>	None allocated
<b>UN Proper Shipping Name:</b>	None allocated
<b>Class and Subsidiary Risk :</b>	None allocated
<b>Packaging Group:</b>	None allocated
<b>Marine Pollutant:</b>	No
<b>Special Precautions for User:</b>	None
<b>HAZCHEM code:</b>	None allocated

## SECTION 15: REGULATORY INFORMATION

<b>Poisons Schedule:</b>	Not scheduled
Exposures by inhalation to high levels of dust may be regulated under the Hazardous Substances Regulations (State) as they are applicable to Respirable Crystalline Silica, requiring exposure assessment, controls and health surveillance.	

## SECTION 16: OTHER INFORMATION

**Date of revision of this SDS:** July 2018

### Australian Standards References:

AS/NZS 1336	Recommended Practices for Occupational Eye Protection
AS/NZS 1715	Selection, Use and Maintenance of Respiratory Protective Devices
AS/NZS 1716	Respiratory Protective Devices
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)

### Other References:

NOHSC:1008 (2004)	Approved Criteria for Classifying Hazardous Substances
Model Code of Practice	Preparation of Safety Data Sheets for Hazardous Chemicals, December 2011, Safe Work Australia.
Model Code of Practice	Labelling of Workplace Hazardous Chemicals, December 2011, Safe Work Australia.
Model Code of Practice	Managing Risks Of Hazardous Chemicals In The Workplace, July 2012, Safe Work Australia.
WHS	Guidance on the Classification of Hazardous Chemicals under the WHS Regulations, April 2012, Safe Work Australia.
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7 <sup>th</sup> edition, National Transport Commission.
WES	Workplace Exposure Standards For Airborne Contaminants, April 2013, Safe Work Australia.
WES	Guidance On The Interpretation Of Workplace Exposure Standards For Airborne Contaminants, April 2013, Safe Work Australia.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 3 <sup>rd</sup> revised edition, United Nations, New York and Geneva, 2009.
GHS	Understanding the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), United Nations, New York and Geneva, 2010.
HCIS	Hazardous Chemical Information System (HCIS), internet advisory service, Safe Work Australia.
HCIL	GHS Hazardous Chemical Information List (HCIL), internet advisory service, Safe Work Australia.

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END OF SDS