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**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

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**1.1 Product identifier****Product name** **HOLCIM PREMIXED CONCRETE****Synonyms** DYNAMAX • HOLCIM CONCRETE • HOLCIM ECOPACT • HOLCIM GEOSTONE • HOLCIM READYPAVE  
• HOLCIM SHOTCRETE • HOLCIM SUPERSPRAY**1.2 Uses and uses advised against****Uses** ADHESIVE - CEMENTITIOUS • BINDING AGENT • CEMENT • GROUT**1.3 Details of the supplier of the product****Supplier name** **HOLCIM (AUSTRALIA) PTY LTD****Address** Level 40, 100 Miller Street, North Sydney, NSW, 2060, AUSTRALIA**Telephone** (02) 9412 6600**Fax** (02) 9412 6601**Website** <http://www.holcim.com.au>**1.4 Emergency telephone numbers****Emergency** (02) 9412 6600; 13 11 26 (Poisons Information Centre)

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**2. HAZARDS IDENTIFICATION**

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**2.1 Classification of the substance or mixture**

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

**Physical Hazards**

Not classified as a Physical Hazard

**Health Hazards**

Skin Corrosion/Irritation: Category 2

Skin Sensitisation: Category 1

Serious Eye Damage / Eye Irritation: Category 1

Specific Target Organ Toxicity (Single Exposure): Category 3 (Respiratory Irritation)

**Environmental Hazards**

Not classified as an Environmental Hazard

**2.2 GHS Label elements****Signal word** **DANGER****Pictograms****Hazard statements**

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.

**PRODUCT NAME    HOLCIM PREMIXED CONCRETE****Prevention statements**

P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

**Response statements**

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTRE or doctor/physician.  
P321 Specific treatment is advised - see first aid instructions.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Storage statements**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

**Disposal statements**

P501 Dispose of contents/container in accordance with relevant regulations.

**2.3 Other hazards**

No information provided.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content
QUARTZ (CRYSTALLINE SILICA)	14808-60-7	238-878-4	<30%
SILICIC ACID	7699-41-4	231-716-3	<4%
HEXAVALENT CHROMIUM	18540-29-9	-	<0.0001%
AGGREGATE	-	-	~ 60%
ALUMINOSILICATE	1302-93-8	215-113-2	<30%
PORTLAND CEMENT, SLAG, FLY ASH	65996-69-2	266-002-0	<30%
WATER	7732-18-5	231-791-2	<20%
POLYPROPYLENE	-	-	<10%
STEEL	-	-	<10%
METALLIC OXIDES	-	-	<4%
ADMIXTURE(S)	-	-	<1%

**Ingredient Notes**

Respirable crystalline silica fraction is < 0.1 %. Cement in concrete contains trace amounts (2-10 ppm) of Chromium VI (hexavalent chromium). Dependent on quarry location, the aggregate rock type can be described as meta-dolerite, amphibolite, granite with dolerite dykes or greenstone with varying concentrations of actinolite, epidote, feldspar, chlorite, calcite, sphenechlorite, pyroxene and limonite. In some cases natural rock dolerite aggregates may contain traces (<0.01% by weight) of fibrous actinolite.

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**4. FIRST AID MEASURES**

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**4.1 Description of first aid measures**

**Eye** If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

**Inhalation** If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

**Skin** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

**Ingestion** For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

**First aid facilities** Eye wash facilities and safety shower should be available.

#### **4.2 Most important symptoms and effects, both acute and delayed**

Irritating to the eyes, skin and respiratory system. Chronic over exposure to silica quartz dust may result in silicosis (lung disease). Principal symptoms of silicosis are coughing and breathlessness. Some individuals may exhibit an allergic response upon exposure to this product, possibly due to the trace amounts of chromium present. Crystalline silica and hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1).

#### **4.3 Immediate medical attention and special treatment needed**

Treat symptomatically.

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## **5. FIRE FIGHTING MEASURES**

### **5.1 Extinguishing media**

Use an extinguishing agent suitable for the surrounding fire.

### **5.2 Special hazards arising from the substance or mixture**

Non flammable. May evolve toxic gases if strongly heated.

### **5.3 Advice for firefighters**

Treat as per requirements for surrounding fires. Evacuate area and contact emergency services. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

### **5.4 Hazchem code**

None allocated.

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## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Contact emergency services where appropriate.

### **6.2 Environmental precautions**

Prevent product from entering drains and waterways.

### **6.3 Methods of cleaning up**

Contain spillage, then collect and place in suitable containers for reuse or disposal. Avoid generating dust.

### **6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

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## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

For dry concrete: The cutting, drilling or use of powered tools (e.g. saw or angle grinder) on dry concrete can cause dust to be generated which may be respirable and contain crystalline silica. For wet concrete: Prolonged contact with wet concrete has been known to cause severe "alkali burns". Control methods to prevent both "alkali burns" and inhalation of dusts and fibres are contained in Section 8.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in a cool, dry, well ventilated area, removed from moisture, incompatible substances and foodstuffs. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use. Store between 0°C and 30°C.

### **7.3 Specific end uses**

No information provided.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Chromium (VI) (as Cr)	SWA [Proposed]	--	0.000007	--	--
Chromium (VI) compounds (as Cr)	SWA [AUS]	--	0.05	--	--
Iron oxide fume (Fe <sub>2</sub> O <sub>3</sub> ) (as Fe)	SWA [AUS]	--	5	--	--
Nuisance Dust	SWA [AUS]	--	10	--	--
Quartz (respirable dust)	SWA [AUS]	--	0.05	--	--
Quartz (respirable dust) (Precautionary advice)	WorkSafe VIC	--	0.02	--	--

#### Biological limits

Ingredient	Reference	Determinant	Sampling Time	BEI
HEXAVALENT CHROMIUM	ACGIH BEI	Total chromium in urine	End of shift at end of workweek	25 µg/L
	ACGIH BEI	Total chromium in urine	Increase during shift	10 µg/L
	WEL [UK]	Total chromium in urine	Post shift	10 µmol chromium/mol creatinine in urine
	WES [NZ]	Total chromium in urine	End of shift at end of workweek	30 µg/L
	WES [Proposed]	Total chromium in urine	End of shift at end of workweek	25 µg/L

### 8.2 Exposure controls

#### Engineering controls

All work should be carried out in such a way as to minimise dust generation and reduce inhalation to as low as reasonably practicable. "Uncontrolled" dry cutting or processing such as grinding should be avoided. Utilise water to suppress dust or on- tool extraction to collect dust where power tools are used to cut, grind and drill cured concrete.

Use wet methods or Class M or H vacuums for cleaning equipment surfaces where dust may have accumulated from use of power tools. Maintain ambient levels of Respirable Dust and Respirable Crystalline Silica levels below the recommended exposure standards (see 8.1 above).

#### PPE

<b>Eye / Face</b>	Wear dust-proof goggles.
<b>Hands</b>	Wear PVC or rubber gloves.
<b>Body</b>	When using large quantities or where heavy contamination is likely, wear coveralls.
<b>Respiratory</b>	Personal respiratory protection may be required where dust is airborne. 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, 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. Dust control measures providing respiratory protection against Respirable Crystalline Silica dust will also minimise and control potential exposure to fibrous minerals.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	OFF-WHITE TO GREY POWDER
<b>Odour</b>	AMMONIA ODOUR
<b>Flammability</b>	NON FLAMMABLE

**9.1 Information on basic physical and chemical properties**

Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	> 1200°C
Evaporation rate	NOT AVAILABLE
pH	12 to 13
Vapour density	NOT AVAILABLE
Relative density	2.5
Solubility (water)	SLIGHTLY SOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

**9.2 Other information**

% Volatiles	0 %
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**10. STABILITY AND REACTIVITY**

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**10.1 Reactivity**

Carefully review all information provided in sections 10.2 to 10.6.

**10.2 Chemical stability**

Stable under recommended conditions of storage.

**10.3 Possibility of hazardous reactions**

Polymerization will not occur.

**10.4 Conditions to avoid**

Avoid heat, sparks, open flames and other ignition sources. Keep away from water – must be kept dry.

**10.5 Incompatible materials**

Incompatible with oxidising agents (e.g. hypochlorites), ethanol, acids (e.g. hydrofluoric acid) and interhalogens (e.g. chlorine trifluoride). Water contact may increase product temperature 2°C to 3°C.

**10.6 Hazardous decomposition products**

May evolve toxic gases if heated to decomposition.

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**11. TOXICOLOGICAL INFORMATION**

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**11.1 Information on toxicological effects**

**Acute toxicity**                      Acute oral exposure may result in irritation of the mouth, throat, oesophagus and gastrointestinal tract.

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
STEEL	30000 mg/kg (rat)	--	--

**Skin**                                      Irritating to the skin. Contact with powder or wetted form may result in irritation, rash and dermatitis.

**Eye**                                      Contact with moisture in the eyes may result in irritation, lacrimation, pain, redness, conjunctivitis and possible alkaline burns aided by mechanical irritation and abrasion.

**Sensitisation**                      Not classified as causing respiratory sensitisation. However, some individuals may exhibit an allergic response upon exposure to cement, possibly due to trace amounts of chromium.

**Mutagenicity**                      Insufficient data available to classify as a mutagen.

**Carcinogenicity**                      This product may contain trace amounts of 'respirable' crystalline silica and hexavalent chromium compounds which are classified as carcinogenic to humans (IARC Group 1). However, there is sufficient information to conclude that the relative risk of lung cancer from exposure to crystalline silica is increased in persons with silicosis. Therefore preventing the onset of silicosis will also reduce the cancer risk.

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<b>Reproductive</b>	Insufficient data available to classify as a reproductive toxin.
<b>STOT - single exposure</b>	Irritating to the respiratory system. Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in breathing difficulties.
<b>STOT - repeated exposure</b>	<p>Not classified as causing organ damage from repeated exposure. Repeated exposure to crystalline silica may cause lung fibrosis (silicosis), however due to the low levels of respirable crystalline silica in this product, adverse health effects are not anticipated with normal use.</p> <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 Department of Mines, Industry Regulation and Safety (14 November 2013):</p> <p>"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."</p>
<b>Aspiration</b>	This product is a solid and aspiration hazards are not expected to occur.

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**12. ECOLOGICAL INFORMATION**

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**12.1 Toxicity**

May be harmful to the aquatic environment due to the alkaline nature of the product. This product is non-toxic to aquatic organisms when present as a cured solid.

**12.2 Persistence and degradability**

Product is persistent and would have a low degradability.

**12.3 Bioaccumulative potential**

There is no evidence to suggest bioaccumulation will occur.

**12.4 Mobility in soil**

A low mobility would be expected in a landfill situation.

**12.5 Other adverse effects**

Avoid contamination of drains and waterways.

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**13. DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment methods**

<b>Waste disposal</b>	Reuse or recycle where possible. Alternatively, ensure product is covered with moist soil to prevent dust generation and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information (if required).
<b>Legislation</b>	Dispose of in accordance with relevant local legislation.

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**14. TRANSPORT INFORMATION**

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**NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA**

	<b>LAND TRANSPORT (ADG)</b>	<b>SEA TRANSPORT (IMDG / IMO)</b>	<b>AIR TRANSPORT (IATA / ICAO)</b>
<b>14.1 UN Number</b>	None allocated.	None allocated.	None allocated.
<b>14.2 Proper Shipping Name</b>	None allocated.	None allocated.	None allocated.
<b>14.3 Transport hazard class</b>	None allocated.	None allocated.	None allocated.
<b>14.4 Packing Group</b>	None allocated.	None allocated.	None allocated.

**14.5 Environmental hazards**

Not a Marine Pollutant.

**14.6 Special precautions for user**

<b>Hazchem code</b>	None allocated.
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## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

<b>Poison schedule</b>	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
<b>Classifications</b>	Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).
<b>Inventory listings</b>	<b>AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)</b> All components are listed on AIIC, or are exempt.

## 16. OTHER INFORMATION

**Additional information** CEMENT CONTACT DERMATITIS: Individuals using wet cement, mortar, grout or concrete could be at risk of developing cement dermatitis. Symptoms of exposure include itchy, tender, swollen, hot, cracked or blistering skin with the potential for sensitisation. The dermatitis is due to the presence of soluble (hexavalent) chromium.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

#### PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

#### HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

<b>Abbreviations</b>	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
	GHS	Globally Harmonized System
	GTEPG	Group Text Emergency Procedure Guide
	IARC	International Agency for Research on Cancer
	LC50	Lethal Concentration, 50% / Median Lethal Concentration
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m <sup>3</sup>	Milligrams per Cubic Metre
	OEL	Occupational Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	STEL	Short-Term Exposure Limit
	STOT-RE	Specific target organ toxicity (repeated exposure)
	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	SWA	Safe Work Australia
	TLV	Threshold Limit Value
	TWA	Time Weighted Average

**PRODUCT NAME    HOLCIM PREMIXED CONCRETE**

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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