SAFETY DATA SHEET (SDS)

Hydrated Lime.

SECTION 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	Hydrated Lime
Other Names	Slaked lime, Calcium Hydroxide (Ca(OH)2)
Supplier Name	**Australian Agricultural Mineral Pty Ltd** ABN 77 637 813 131
Address	Level 14/1 Collins St, Melbourne VIC 3000
Telephone	07 4667 4178
Facsimile	07 4667 4201
Emergency Contact	0408 944 147 (After Hours)
Use	pH control, water treatment, sewerage treatment, steel industry, sugar refining, chemical refining, minerals processing. trial applications.

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification	HAZARDOUS SUBSTANCE. NON DANGEROUS GOODS. According to the Approved Criteria for Classifying Hazardous Substances [NOHSC], hydrated lime dust may be harmful in contact with skin and if swallowed. Danger of serious damage to health by prolonged exposure through inhalation. Irritating to eyes, respiratory system and skin. Do not breathe dust. Avoid contact with skin and eyes. Do not empty into drains. Wear suitable protective clothing, gloves, and eye/face protection. In case of insufficient ventilation, wear suitable respiratory equipment.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICL NAME	CAS NUMBER	PROPORTION
Calcium Hydroxide	1305-62-0	92 % min.
Magnesium Hydroxide	1309-48-4	1 - 2%
Aluminum Hydroxide	1344-28-1	0 – 0.5%
Sulfur	7704-34-9	0 – 0.05%
Silicon Hydroxide	7631-86-9	1 – 1.5%
Iron Hydroxide	1309-37-1	0 – 0.5%

CAS # 1305-62-0 FORMULA: Ca(OH)2 FORMULA WEIGHT 56.08 UN # UN1910

SECTION 4. FIRST AID MEASURES

Swallowed	Wash mouth and lips with copious amounts of water, and give limited amounts of milk or water to drink (150ml). Do not induce vomiting. Seek medical attention.
Eye	Hold eyes open and flush with copious amounts of water for at least 10 minutes. Seek medical attention.
Skin	Immediately remove all contaminated clothing, including footwear. Wash material off skin, using plenty of water preferably under the shower. If effects persist, seek medical attention.
Inhaled	Remove to fresh air away from the dusty area. Seek medical attention.
First Aid Facilities	Eyewash station.
General Advice	Consult a physician for all exposures except minor instances of inhalation.

SECTION 5. FIREFIGHTING MEASURES

Fire/Explosion Hazard	Hydrated lime is non-combustible.
Hazchem Code	None allocated.
Flammability	Not flammable.
Extinguishing Agents	Fires in areas surrounding quicklime storage must be extinguished using non-water extinguishers. DO NOT USE WATER.
Hazards from Combustion Products	None.
Special Protective Precautions and equipment for firefighters	None required. Refer to PPE.
Extinguishing Media	Violent reactions with maleic anhydride, nitroethane, nitromethane, nitroparaffins, nitropropane, and phosphorus. Strong exothermic (heat producing) reaction with water.
Evacuate	No.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spills	PPE must be worn to clean up spillages with a broom, shovel, or vacuum equipment. Dry cleanup only. Minimise dust generation. DO NOT USE WATER. Keep product out of storm water and sewer drains.

SECTION 7. HANDLING AND STORAGE

Handling	When supplied in bags these need to be handled in accordance with manual handling regulations and code.
Storage	Hydrated lime should be stored in a cool protected place away from moisture, strong oxidants, or acids and to minimise dust emissions. Storage in steel or concrete bins and silos, or plastic-lined bags, is appropriate.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits	National Occupational Health & Safety Commission (NOHSC) Australia Occupational Exposure Standard: Exposure to dust should be kept as low as practicable and below the following OES. Calcium oxide 2 mg/ m3 TWA (time-weighted average). Crystalline silica (quartz): 0.1 mg/m3 TWA (time-weighted average) as respirable dust (< 7 microns particle equivalent aerodynamic diameter).
Engineering Controls	All work with Hydrated lime should be carried out in a manner that minimises dust generation, exposure to dust, and repeated skin contact. When handling Hydrated lime use local mechanical ventilation or extraction in areas where dust could escape into the work environment. For bulk deliveries, closed pumping systems are recommended. For handling of individual bags, follow instructions for personal protection. Workareas should be cleaned regularly by wet sweeping or vacuuming.
Personal Protection Skin	If handling Hydrated lime or products containing Hydrated lime, personnel should wear protective clothing and impervious boots, and suitable impervious gloves such as PVC Remove clothing that has become contaminated with wet or dry product to avoid prolonged contact with the skin. If product gets into boots, remove socks and boots immediately and wash skin thoroughly. Wash work clothes regularly. To avoid contamination of face and lips and ingestion, wash hands before eating, or smoking.
Eyes	Avoid contact with eyes. Splash resistant Safety Glasses with side shields or safety goggles should be worn or a face-shield.
Respiratory	In dusty environments use a respirator (filter mask) such as Class P1 or P2.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (dry)	A fine powder ranging in color from grey to off-white.
Odour	No odour.
Boiling/Melting Point	Melting point >2500oC.
Vapour Pressure	Not applicable.
Specific Gravity	3.2 to 3.4.
Bulk Density	900-1400kg/m3.
Flash Point	Non-applicable.
Flammability Limits	Non-combustible.
Auto Ignition Temp	Not applicable.
Solubility in Water	Reacts vigorously with water generating heat and steam.
pH	Approximately 12.
Other Properties	Reacts violently with water, generating much heat. Hydrated lime reacts with: Boric Oxide (B_2O_3), Calcium Chloride ($CaCl_2$), Boron Fluoride (BF_3), Hydrofluoric Acid (HF), Phosphoric Anhydride (P_2O_5), Fluorine Gas (F_2) and Chlorine Trifluoride (ClF_3).

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SECTION 10. STABILITY AND REACTIVITY

An alkaline material that reacts vigorously with acids, with the generation of much heat.
Reacts vigorously with water producing heat and caustic steam.
May absorb carbon dioxide from the atmosphere forming calcium carbonate.
Soluble in glycerol, aqueous solution of sucrose, and ammonium chloride.
Incompatible with maleic anhydride, nitroparaffins, and phosphorus.

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE	
Swallowed	Has a caustic reaction and is corrosive to the mouth and throat.
Eye	Irritation and corrosive to the eyes. May cause chemical conjunctivitis and redness and watering of eyes and damage to the cornea.
Skin	Irritating and drying to the skin. May cause alkali burns and irritant or allergic dermatitis Disorders may be aggravated by exposure to dust or contact with wet cement.
Inhaled	Irritating to the nose, throat, and respiratory system causing coughing and sneezing.
CHRONIC	
Skin	Prolonged exposure may cause irritant dermatitis.
Inhaled	Repeated exposure may cause severe mucous membrane irritation, bronchitis, and pneumonia. Repeated and prolonged exposure to dust levels which exceed the OES for crystalline silica (see above) may occur. This can cause bronchitis, and silicosis (scarring of the lung). Long term overexposure to respirable crystalline silica dust may increase the risk of other irreversible and serious disorders including scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels and internal organs). NOHSC has not classified crystalline silica as a carcinogen. There is debate in the medical literature concerning whether there is any risk of lung cancer arising from long term high overexposure to respirable crystalline silica. Risk of lung cancer has not been identified from using this product. The International Agency for Research on Cancer (IARC) has classified Crystalline Silica inhaled in the form of quartz or cristobalite from occupational sources, as carcinogenic to humans (Group 1).

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	Because of the high pH of this product, it would be expected to produce significant acute ecotoxicity upon exposure to aquatic organisms and aquatic systems.
Persistence and Degradability	The product has no bioaccumulation or food chain toxicity potential.
Mobility	Soluble in water (as hydroxide) to form alkaline solution. Low mobility in most ground conditions.

SECTION 13. DISPOSAL CONSIDERATIONS

Material should be recycled, or for small amounts it may be neutralized with dilute hydrochloric acid to a pH of 6-9, before disposal in accordance with local authority guidelines.
Keep out of sewer, storm water drains, and natural waterways.
Measures should be taken to prevent dust generation during disposal and exposure and personal precautions should be observed (see above).

SECTION 14. TRANSPORT INFORMATION

Hydrated lime is not classified as a hazardous material by US DOT and is not regulated by the Transportation of Dangerous Goods (TDG) when shipped by any mode of transport. Not classified as dangerous goods by International Maritime Dangerous Goods (IMDG)

Proper Shipping Name	None Allocated.
Class and Subsidiary Risk	None Allocated.
Special Precautions for Use	Avoid generating and breathing dust.

SECTION 15. REGULATORY INFORMATION

Hydrated lime is classified as non-Dangerous Goods.
Classified as Hazardous according to the criteria of the National Occupational Health and Safety Commission (NOHSC) Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008] 3rd Edition.

SECTION 16. OTHER INFORMATION

For further information on this product, please contact:

Telephone: 07 4667 4178 (Business hours)

0408 944 147 (After hours)

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