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## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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### 1.1 Product identifier

**Product name** LIME  
**Synonyms** CALCIUM HYDRATE • CALCIUM HYDROXIDE • LIME HYDRATE • SLAKED LIME

### 1.2 Uses and uses advised against

**Uses** BINDING AGENT • DRILLING FLUID ADDITIVE • FLUX • NEUTRALISING AGENT

### 1.3 Details of the supplier of the product

**Supplier name** NEWPARK DRILLING FLUIDS (AUSTRALIA) LTD  
**Address** 11 Alacrity Place, Henderson, WA, 6166, AUSTRALIA  
**Telephone** +61 8 9410 8200  
**Fax** +61 8 9410 8299  
**Website** [www.newpark.com](http://www.newpark.com)

### 1.4 Emergency telephone numbers

**Emergency** 1800 127 406 (Australia); +64 4 917 9888 (International)

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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  
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.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.

#### Prevention statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**PRODUCT NAME LIME****Response statements**

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position 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 CENTER or doctor/physician.
P321	Specific treatment is advised - see first aid instructions.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before re-use.

**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.
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**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
CALCIUM HYDROXIDE	1305-62-0	215-137-3	80 to 90%
MAGNESIUM HYDROXIDE	1309-42-8	215-170-3	<6%
QUARTZ (CRYSTALLINE SILICA)	14808-60-7	238-878-4	2 to 6%
BOEHMITE (AL(OH)O)	1318-23-6	215-284-3	0.2 to 2%
IRON OXIDE	1332-37-2	215-570-8	<0.4%

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**4. FIRST AID MEASURES**

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**4.1 Description of first aid measures**

<b>Eye</b>	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.
<b>Inhalation</b>	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
<b>Skin</b>	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.
<b>Ingestion</b>	For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
<b>First aid facilities</b>	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, with possible burns.

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

Treat symptomatically.

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**5. FIRE FIGHTING MEASURES**

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**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**

No fire or explosion hazard exists.

**5.4 Hazchem code**

None allocated.

## 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.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

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

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

### 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>
Calcium hydroxide	SWA [AUS]	--	5	--	--
Calcium hydroxide	SWA [Proposed]	--	1	--	--
Iron oxide fume (Fe <sub>2</sub> O <sub>3</sub> ) (as Fe)	SWA [AUS]	--	5	--	--
Quartz (respirable dust)	SWA [AUS]	--	0.1	--	--
Quartz (respirable dust)	SWA [Proposed]	--	0.05	--	--
Quartz (respirable dust)	WorkSafe VIC	--	0.05	--	--

### Biological limits

No biological limit values have been entered for this product.

### 8.2 Exposure controls

**Engineering controls** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

**PRODUCT NAME LIME**

**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>	Where an inhalation risk exists, wear a Class P1 (Particulate) respirator. At high dust levels, wear a Powered Air Purifying Respirator (PAPR) with Class P3 (Particulate) filter or a Class P3 (Particulate) respirator.



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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	WHITE OR OFF-WHITE POWDER
<b>Odour</b>	ODOURLESS
<b>Flammability</b>	NON FLAMMABLE
<b>Flash point</b>	NOT RELEVANT
<b>Boiling point</b>	NOT AVAILABLE
<b>Melting point</b>	580°C (Approximately)
<b>Evaporation rate</b>	NOT AVAILABLE
<b>pH</b>	12
<b>Vapour density</b>	NOT AVAILABLE
<b>Specific gravity</b>	2.2 - 2.3
<b>Solubility (water)</b>	SLIGHTLY SOLUBLE
<b>Vapour pressure</b>	NOT AVAILABLE
<b>Upper explosion limit</b>	NOT RELEVANT
<b>Lower explosion limit</b>	NOT RELEVANT
<b>Partition coefficient</b>	NOT AVAILABLE
<b>Autoignition temperature</b>	NOT AVAILABLE
<b>Decomposition temperature</b>	NOT AVAILABLE
<b>Viscosity</b>	NOT AVAILABLE
<b>Explosive properties</b>	NOT AVAILABLE
<b>Oxidising properties</b>	NOT AVAILABLE
<b>Odour threshold</b>	NOT AVAILABLE

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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 contact with incompatible substances.

### 10.5 Incompatible materials

Incompatible (violently) with acids (e.g. nitric acid), maleic anhydride, nitroethane, nitromethane, nitroparaffins, nitropropane and phosphorus.

### 10.6 Hazardous decomposition products

May evolve toxic gases if heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity** Ingestion may result in irritation of the mouth, throat, oesophagus and gastrointestinal tract. No known toxicological effects from this product. Based on available data, the classification criteria are not met. Acute Oral Toxicity (Calcium Hydroxide): LD50 = 7300 mg/kg (mouse).

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
CALCIUM HYDROXIDE	7300 mg/kg (mouse)	--	--
MAGNESIUM HYDROXIDE	8500 mg/kg (rat, mouse)	--	--

**Additional ingredient toxicity values:**

MAGNESIUM HYDROXIDE (1309-42-8)  
 LD50 (intraperitoneal) 815 mg/kg (mouse)  
 TDLo (oral) 2747 mg/kg (infant)

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

**Eye** Irritating to the eyes. Contact may result in irritation, lacrimation, pain, redness, corneal burns and possible permanent damage.

**Sensitisation** Not classified as causing skin or respiratory sensitisation.

**Mutagenicity** Not classified as a mutagen.

**Carcinogenicity** Crystalline silica is classified as carcinogenic to humans (IARC Group 1). However, there is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis.

**Reproductive** Not classified as a reproductive toxin.

**STOT - single exposure** Irritating to the respiratory system. Over exposure to dust may result in severe mucous membrane irritation of nose and throat, coughing and bronchitis.

**STOT - repeated exposure** Not classified as causing organ damage from repeated exposure.

**Aspiration** Not relevant.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

The aquatic toxicity of calcium hydroxide is due to its alkalinity.

### 12.2 Persistence and degradability

Neutralised to calcium carbonate by absorption of atmospheric carbon dioxide and is not degraded by oxidation.

### 12.3 Bioaccumulative potential

Calcium hydroxide does not bioaccumulate in the environment.

### 12.4 Mobility in soil

Not available, but considered low.

### 12.5 Other adverse effects

No information provided.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**Waste disposal** Neutralise with dilute acid (e.g. 3 mol/L hydrochloric acid) or similar. For small amounts, absorb with sand or similar and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information (if required).

**Legislation** Dispose of in accordance with relevant local legislation.

## 14. TRANSPORT INFORMATION

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

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<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**

No information provided.

**14.6 Special precautions for user**

**Hazchem code** None allocated.

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**15. REGULATORY INFORMATION**

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

- Poison schedule** 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).
- Classifications** Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.
- Inventory listings** **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**  
All components are listed on AICS, or are exempt.

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**16. OTHER INFORMATION**

**Additional information** 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.

**Abbreviations**

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

**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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