



# Safety Data Sheet (SDS)

## Calcium Hydroxide

CAS No 1305-62-0

Revision date: 19 December 2016

### 1 Identification of The Substance or Mixture and of The Supplier

1.1 GHS product identifier : Calcium hydroxide

1.2 Other means of identification : Calcium dihydroxide, Calcium hydrate, CALCIUM HYDROXIDE, Hydrated lime, Slaked lime

1.3 Use of the chemical: pH control, soil stabilization, water and sewerage treatment, a binder in mortars and renders.

1.4 Manufacturer's details :

Company name: RCI Lime Sdn Bhd

Address: Lot 45157 & 45158, Gunung Panjang, 31600 Gopeng, Perak, Malaysia

Tel: +6 05 - 359 3188

FAX: +6 05 - 359 3228

E-mail: info@rci.com.my

Emergency call: 019-458 8819

### 2. Hazard Identification

#### GHS Classification (Based on ICOP)

Physical Hazards		
Explosives		Not applicable
Flammable gases		Not applicable
Flammable aerosols		Not applicable
Oxidizing gases		Not applicable
Gases under pressure		Not applicable
Flammable liquids		Not applicable
Flammable solids		Not classified
Self-reactive substances and mixtures		Not applicable
Pyrophoric liquids		Not applicable
Pyrophoric solids		Not classified
Self-heating substances and mixtures		Not classified
Substances and mixtures which, in contact with water, emit flammable gases		Not classified
Oxidizing liquids		Not applicable
Oxidizing solids		Classification not possible
Organic peroxides		Not applicable
Corrosive to metals		Classification not possible

<b>Human Health Hazards</b>	Acute toxicity (Oral)	Not classified
	Acute toxicity (Dermal)	Classification not possible
	Acute toxicity (Inhalation: Gases)	Not applicable
	Acute toxicity (Inhalation: Vapours)	Classification not possible
	Acute toxicity (Inhalation: Dusts)	Classification not possible
	Acute toxicity (Inhalation: Mists)	Not applicable
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Respiratory sensitization	Classification not possible
	Skin sensitization	Classification not possible
	Germ cell mutagenicity	Classification not possible
	Carcinogenicity	Classification not possible
	Reproductive toxicity	Classification not possible
	Specific target organ toxicity - Single exposure	Category 3 (respiratory system)
	Specific target organ toxicity - Repeated exposure	Category 2 (lung)
Aspiration hazard	Classification not possible	
<b>Environmental Hazards</b>	Acute toxicity to the aquatic environment	Classification not possible
	Chronic toxicity to the aquatic environment	Classification not possible

**Label Elements**

**Pictogram and Symbol :**



**Signal word :**

**Danger**

**Hazard statement :**

- Causes skin irritation
- Causes serious eye damage
- Causes damage to respiratory system
- May cause damage to lung through prolonged or repeated exposure

**Precaution:**

[Prevention]

Do not breathe dust/fume.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

[Response]

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately seek medical attention or call doctor/physician.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

[Storage]

Store locked up.

[Disposal]

Dispose of contents/container in accordance with local/regional/ national/international regulations.

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**3 Composition / Information on Ingredients**

3.1 Substance : Calcium hydroxide

3.2 Other name : Calcium dihydroxide, Calcium hydrate, CALCIUM HYDROXIDE, Hydrated lime, Slaked lime

3.2 Chemical formula :  $\text{Ca}(\text{OH})_2$

3.3 CAS number : 1305-62-0

3.5 ICSC number : 0408

3.6 EC Number : 215-137-2

3.7 NITE number : 811

3.8 Ingredients :

<u>Composition</u>	<u>Percentage by Weight</u>
Calcium Hydroxide	85 – 95%
Magnesium Oxide	1.0 – 5.0%
Silicon Dioxide	0.1 – 2.0%
Aluminium Oxide	0.1 – 1.0%
Ferric Oxide	0.01 – 0.1%

## **4 First Aid Measures**

### 4.1 Description of necessary measures.

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately seek medical attention or call doctor/physician.

### 4.2 Most important symptoms/effects, acute and delayed

Causes skin irritation (Skin corrosion/irritation Category 2 )

Causes serious eye damage (Eye irritation Category 2 )

Causes damage to respiratory system (Specific target organ toxicity - Single exposure Category 3 (respiratory system) )

May cause damage to lung through prolonged or repeated exposure (Specific target organ toxicity - Repeated exposure Category 2 (lung) )

Please refer to "11 Toxicological information" in detail.

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

If skin irritation occurs: Get medical advice/attention.

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## **5 Fire Fighting Measures**

Acute hazards/symptoms in Fire: Not combustible.

First AID/Fire Fighting in Fire: In case of fire in the surroundings: all extinguishing agents allowed.

For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. Use extinguisher media most appropriate for the surrounding fire. Contact professional fire-fighters immediately.

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## **6 Accidental Release Measures**

Sweep spilled substance into containers, and then removes to safe place. (Extra personal protection: P2 filter respirator for harmful particles).

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## **7 Handling and Storage**

### 7.1 Precautions for safe handling

Do not breathe dust/fume.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

Take off contaminated clothing and wash before reuse.

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

Store locked up.

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## **8 Exposure Controls and Personal Protection**

8.1 Control parameters : ACGIH 2006, TLV-TWA 5mg/m<sup>3</sup>

8.2 Appropriate engineering controls (Please refer to engineering controls described in "7.1 Precautions for safe handling".)

8.3 Individual protection measures, such as personal protective equipment (Please refer to Individual protection measures described in "7.1 Precautions for safe handling".)

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## **9 Physical and Chemical Properties**

9.1 Appearance ( physical state, colour, etc.) : colourless crystal or white powder

9.2 Odour : No data

9.3 Odour threshold : No data

9.4 pH : 12.44 ( 25° C saturated water solution)

9.5 Melting point/Freezing point : 580°C (decomposition)

9.6 Initial boiling point and boiling range : decomposition

9.7 Flash point : non-combustible

9.8 Evaporation rate : No data

9.9 Flammability (solid, gas) : No data

9.10 Upper/lower flammability or explosive limits : non-combustible

9.11 Vapour pressure : No data

9.12 Bulk density : 450 kg/m<sup>3</sup>

9.13 Relative Density / Specific Gravity : 2.2 – 2.3 g/cm<sup>3</sup> ( true )

9.14 Solubility: slightly soluble in water.

9.15 Partition coefficient: n-octanol /water : No data

9.16 Auto-ignition temperature : 607° C

9.17 Decomposition temperature : 580° C

9.18 Refractive Index : 1.55 – 1.57

9.19 GHS Classification - Physical Hazards

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## 10 Stability and Reactivity

10.1 Stability : Chemically stable, but reacts slowly with carbon dioxide to form calcium carbonate.

10.2 Possibility of hazardous reactions: React with strong oxidizing reagent.

10.3 Conditions to avoid : Heat

10.4 Incompatible materials : strong oxidizing reagent

10.5 Hazardous decomposition products : CO, CO<sub>2</sub>, sulfurous compounds

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## 11 Toxicological Information

11.1 Acute toxicity (Oral) :

Not classified because of SPECIES: Rat; ENDPOINT: LD50; VALUE: 7340mg/kg; REFERENCE SOURCE: ACGIH (2001); HSDB (2005)

11.2 Acute toxicity (Dermal) : No data available

11.3 Acute toxicity (Inhalation: Gases) : Solid (GHS definition)

11.4 Acute toxicity (Inhalation: Vapours) : No data available

11.5 Acute toxicity (Inhalation: Dusts / Mist) : No data available

11.6 Skin corrosion / irritation :

Based on descriptions that it has moderate stimulativeness on all body surface exposure including eyes and airways (ACGIH, 7th, 2001) and that it indicates moderate, severe, and a corrosive stimulation on human skin (IUCLID, 2000; HSDB, 2005; ICSC (J) 1997; SITTIG, 4th, 2002; and HSFS, 2005), it was classified as Category 2.

Causes skin irritation (Skin corrosion/irritation Category 2 )

11.7 Serious eye damage / eye irritation :

Based on the description that moderate, severe, and corrosive irritations are indicated to the eyes in humans (ACGIH, 7th, 2001; IUCLID, 2000; HSDB, 2005; ICSC (J) 1997; SITTIG, 4th, 2002; HSFS, 2005), and the description that corrosive irritations are indicated to the rabbits (IUCLID, 2000), it was set as Category 2.

Causes Eye irritation Category 2

11.8 Respiratory sensitization / Skin sensitization : No data available

11.9 Germ cell mutagenicity : No data available

11.10 Carcinogenicity : No data available

11.11 Reproductive toxicity : No data available

#### 11.12 Specific target organ toxicity - Single exposure

Classified into Category 3 (respiratory system) based on the descriptions (ACGIH, 7th, 2001; HSDB, 2005; ICSC (J), 1997; SITTIG, 4th, 2002; HSFS, 2005 ) that it stimulates human respiratory organ and respiratory tract to induce lung edema.

Causes irritation to respiratory system (Specific target organ toxicity - Single exposure Category 3 (respiratory system) )

#### 11.13 Specific target organ toxicity - Repeated exposure

It was classified into Category 2 (lungs) since description that says human lung may be risked in Priority 2 (ICSC (J) 1997; SITTIG, 4th, 2002).

May cause damage to lung through prolonged or repeated exposure (Specific target organ toxicity - Repeated exposure Category 2(lung) )

#### 11.14 Aspiration hazard : No data available

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### **12 Ecological Information**

12.1 Acute toxicity to the aquatic environment: Insufficient data available.

12.2 Chronic toxicity to the aquatic environment: Insufficient data available.

12.3 Other adverse effects : Nil

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### **13 Disposal Considerations**

#### 13.1 Description of waste residues and information on their safe handling and methods of disposal

If you would like to dispose of this chemical, you should properly dispose of this by yourself or ask qualified specific agents dispose of this according to related legislations and local regulations. If you would like to ask the agents dispose of this chemical, you should provide sufficient information on dangerousness and hazard of this chemical.

#### 13.2 The disposal of any contaminated packaging

Container should be recycled after cleaning or if you would like to dispose of container of this chemical, you should properly dispose of this by yourself or ask qualified specific agents dispose of this according to related legislations and local regulations. If you would like to ask the agents dispose of this container, you should provide sufficient information on dangerousness and hazard of this chemical in this container and information on ingredient and notice of container.

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## **14 Transport Information**

14.1 Not classified as dangerous goods by Australian Dangerous Goods (ADG) Code.

14.2 Not classified as dangerous goods by International Maritime Dangerous Goods (IMDG)

14.3 Classified as below by International Air Transport Dangerous Goods (IATA) for transported by AIR.

14.3.1 UN Number : Not Regulated

14.3.2 UN Proper shipping name : Not Regulated

14.3.3 Transport Hazard class(es) : Not Regulated

14.3.4 Packing group, if applicable : Not Regulated

14.4 Marine pollutant: Alkaline material and will cause an increase in pH.

14.5 Special precautions which a user needs to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises

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## **15 Regulatory Information**

15.1 Occupational Safety and Health (Classification, Packaging and Labelling of Hazardous Chemicals) Regulation 2013:

Risk Phrases: R36/38 - Irritating to eyes and skin.

Safety Phrases : S24/25 - Avoid contact with skin and eyes.

: S26 - In case of contact with eyes, rinse immediately with plenty of water and seek Medical advice.

: S36/39 - Wear suitable protective clothing, eye / face protection.

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## **16 Other Information**

16.1 SDS Creation Date : 19 December 2016

16.2 Revision : 9

16.3 References : Industrial Code of Practice ( ICOP ) 2014



