



## 1. DESCRIPTION

**Trade Name:** LIME

**Chemical Class:** Mineral

**Chemical Name:** LIME

**Application:** building construction, soil stabilization for roads, earthen dams, manufacturing chemicals and production of precipitated calcium carbonate.

**Supplier:** TEAM Chemicals

**Telephone:** +44 (0)207 408 7700 - +98 912 3717539

**Address:** No. 43, Souri St., 43 Ashrafi Esfahani Expressway

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

### Ingredients

| NAME   | CAS RN    | INT HAZ | %   |
|--|-----------|---------|-----|
| calcium hydroxide<br>EC NO: 215-137-3 R<br>CODES:<br>R36/37/38 | 1305-62-0 | Xi      | >95 |

## 3. HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW:** CONSIDERED A DANGEROUS SUBSTANCE ACCORDING TO DIRECTIVE 1999/45/EC AND ITS AMENDMENTS.

### Potential Acute Health Effects:

#### SWALLOWED

Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).

#### SKIN

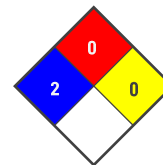
Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic).

**INHALED**

Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system in a substantial number of individuals following inhalation. Although inhalation is not thought to produce harmful effects (as classified under EC Directives), the material may still produce health damage, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally confined to doses producing mortality rather than those producing morbidity (disease, ill-health).

**Potential Chronic Health Effects:**

Principal routes of exposure are usually by skin contact. with the material. eye contact. with the material and inhalation of generated dust. Chronic exposure symptom is narrowing of the esophagus, with difficulty in swallowing. This may happen after weeks, months or years of exposure. [CCINFO Mallinck]

**Irritant** Yes**Flammable** No**Carcinogenic** No**Oxidant** No**Explosive** No**Environmental Hazard** No**Corrosive** Yes**(Risk-Phrases)** R34, R41**(Safety-Phrases)** S24/25, S26, S28, S36/37/39, S45**4. FIRST AID MEASURES**

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**SKIN**

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

**INHALED**

- If dust is inhaled, remove from contaminated area.

**5. FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA** Non combustible.

- There is no restriction on the type of extinguisher which may be used.

**FIRE FIGHTING** Product is not combustible. No special firefighting procedures required.

Alert Fire Brigade and tell them location and nature of hazard.

Use fire fighting procedures suitable for surrounding area.

**FIRE/EXPLOSION HAZARD** Non combustible.

- Not considered a significant fire risk, however containers may burn.

Iron oxide is unlikely to decompose at temperatures attained in a fire.

**FIRE INCOMPATIBILITY** Not determined

**PERSONAL PROTECTION** Not determined

**6. ACCIDENTAL RELEASE MEASURES**

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary:

Neutralize the residue with a dilute solution of acetic acid.

**Large Spill:** Neutralize the residue with a dilute solution of acetic acid. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV.

**7. HANDLING AND STORAGE**

**HANDLING Precautions:** Use good occupational work practice. Observe manufacturer's storing and handling recommendations.

Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Avoid all personal contact, including inhalation.

Avoid generating and breathing dust.

Wear personal protective equipment when handling.



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Use in a well-ventilated area.

Avoid contact with incompatible materials.

When handling, DO NOT eat, drink or smoke.

Keep containers securely sealed when not in use.

Avoid physical damage to containers.

Always wash hands with soap and water after handling. Work clothes should be laundered separately.

Launder contaminated clothing before re-use.

**Storage Precautions:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE CONTROLS

TWA: 5 (mg/m<sup>3</sup>) from ACGIH (TLV) [United States] TWA: 5 (mg/m<sup>3</sup>) [Canada] TWA: 5 (mg/m<sup>3</sup>) from NIOSH Consult local authorities for acceptable exposure limits.

### PERSONAL PROTECTION

**RESPIRATOR** Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent.

**EYE** · Safety glasses with side shields; or as required,

· Chemical goggles.

· Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly.

**HAND/FEET** · Barrier cream. Wear physical protective gloves, eg. leather or Cotton gloves or PVC gloves. Wear safety footwear.

**OTHER** Barrier cream. Wear physical protective gloves, eg. leather or Cotton gloves or PVC gloves. Wear safety footwear.

### ENGINEERING CONTROLS

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.



## 9. PHYSICAL & CHEMICAL PROPERTIES

**Physical state and appearance:** granules and powder

**Color:** White

**Odor:** Odorless

**pH (1% solution):** 14

**Boiling Point:** Not applicable

**Melting/Freezing Point:** 580°C (1076°F)

**Specific Gravity:** 2.3

**Solubility (Water):** Slightly soluble in water

**Purity:** Min.90%

## 10. STABILITY & REACTIVITY

**Chemical Stability:** Stable

**Conditions to Avoid:** Incompatible materials, air

**Materials to Avoid:** Reactive with acids

**Special Remarks on Reactivity:** Incompatible with maleic anhydride, phosphorous, nitroethane, nitromethane, nitroparaffins, nitropropane, polychlorinated phenols + potassium nitrate. When chlorinated phenols are heated for analytical purposes with calcium hydroxide-potassium nitrate mixtures, chlorinated benzodioxins analogous to extremely toxic tetrachlorodibenzodioxin may be formed. Readily absorbs CO<sub>2</sub> from air forming calcium carbonate.

**Special Remarks on Corrosivity:** Not available.

## 11. TOXICOLOGICAL INFORMATION

Lime

### TOXICITY AND IRRITATION

None assigned. Refer to individual constituents.

CALCIUM HYDROXIDE:

|   |  |
|---|--|
| TOXICITY<br>Oral (rat) LD50: 7340 mg/kg | IRRITATION<br>Eye (rabbit): 10 mg - SEVERE |
|---|--|



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### 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** Not available.

**Products of Biodegradation :** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**ECOLOGICAL INFORMATION:** Contact TEAM Environmental Affairs for ecological data.

### 13. DISPOSAL CONSIDERATION

**WASTE MANAGEMENT:** Not Determined

**DISPOSAL METHODS:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### 14. TRANSPORT INFORMATION

**U.S. DOT** Not determined

**U.S. DOT CLASS:** Not a DOT controlled material.

### 15. REGULATORY INFORMATION

**Classification:** Toxicity: refer to section 11 and 12.

**Poisons Schedule (SUSMP):** None allocated.

This material is listed on the international standard such as OHSAS 18001:2007.



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### 16. ADDITIONAL INFORMATION

3 Yearly Revised Primary MSDS

Update in Toxicological Information

Update in Ecological Information

This MSDS summaries to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. TEAM cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.



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**Email:** [sales@teamchem.co](mailto:sales@teamchem.co)

**Website:** [www.teamchem.co](http://www.teamchem.co)

**LinkedIn:** [linkedin.com/company/team-chemicals/](https://www.linkedin.com/company/team-chemicals/)

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. TEAM Chemicals and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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