

MSDS Number: **C0407** * * * * * *Effective Date: 11/02/01* * * * * * *Supercedes: 11/17/99*

MSDS

Material Safety Data Sheet

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

CALCIUM HYDROXIDE

1. Product Identification

Synonyms: Calcium hydrate; slaked lime

CAS No.: 1305-62-0

Molecular Weight: 74.09

Chemical Formula: Ca(OH)₂

Product Codes:

J.T. Baker: 1372, 1374, 5143

Mallinckrodt: 2630, 3288, 4195, 4315, 6805

2. Composition/Information on Ingredients

| Ingredient | CAS No | Percent | Hazardous |
|-------------------|-----------|-----------|-----------|
| Calcium Hydroxide | 1305-62-0 | 99 - 100% | Yes |

3. Hazards Identification

Emergency Overview

DANGER! HARMFUL IF SWALLOWED OR INHALED. CAUSES BURNS TO SKIN AND EYES. CAUSES SEVERE IRRITATION TO RESPIRATORY TRACT.

J.T. Baker SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 1 - Slight

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation:

Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Can cause chemical bronchitis.

Ingestion:

Gastric irritant. Ingestion may be followed by severe pain, vomiting, diarrhea, and collapse. If death does not occur in 24 hours, esophageal perforation may occur, as evidenced by fall in blood pressure and severe pain. A narrowing of the esophagus may occur weeks, months, or years after ingestion, making swallowing difficult.

Skin Contact:

Corrosive. May cause severe burns and blistering, depending on duration of contact.

Eye Contact:

Corrosive. May produce severe irritation and pain. May induce ulcerations of the corneal epithelium. Can cause blindness.

Chronic Exposure:

Prolonged or repeated skin contact may produce severe irritation or dermatitis.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin problems or impaired respiratory function may be more susceptible to the effects of this substance.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

Ingestion:

DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Skin Contact:

In case of contact, wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.

Eye Contact:

Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.

5. Fire Fighting Measures

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):

15 mg/m³ (total dust), 5 mg/m³ (respirable fraction)

-ACGIH Threshold Limit Value (TLV):

5 mg/m³

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece particulate respirator (NIOSH type N100 filters) may be worn for up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White crystals or powder.

Odor:

Odorless.

Solubility:

0.185 g/100 cc water @ 0C

Specific Gravity:

2.24

pH:

12.4 (saturated solution)

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

Decomposes.

Melting Point:

580C (1076F)

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. Readily absorbs carbon dioxide from air to form calcium carbonate.

Hazardous Decomposition Products:

Caustic fumes of calcium oxide form when heated to decomposition (580C; 1076F).

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Violent reactions with maleic anhydride, nitroethane, nitromethane, nitroparaffins, nitropropane, phosphorus. As a strongly alkaline material, it is incompatible with acids.

Conditions to Avoid:

Air, dusting, and incompatibles.

11. Toxicological Information

Oral Rat LD50: 7340 mg/kg; eye rabbit, standard Draize, 10 mg, severe; investigated as a mutagen

| Ingredient | ---NTP Carcinogen--- | | IARC Category |
|-------------------------------|----------------------|-------------|---------------|
| | Known | Anticipated | |
| Calcium Hydroxide (1305-62-0) | No | No | None |

12. Ecological Information

Environmental Fate:

This material is not expected to significantly bioaccumulate.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

```
-----\Chemical Inventory Status - Part 1\-----
Ingredient                                     TSCA  EC   Japan  Australia
-----
Calcium Hydroxide (1305-62-0)                 Yes  Yes  Yes    Yes
```

```
-----\Chemical Inventory Status - Part 2\-----
Ingredient                                     Korea  --Canada--  DSL  NDSL  Phil.
-----
Calcium Hydroxide (1305-62-0)                 Yes   Yes  No    Yes
```

```
-----\Federal, State & International Regulations - Part 1\-----
Ingredient                                     -SARA 302-  -SARA 313-
RQ  TPQ  List  Chemical Catg.
-----
Calcium Hydroxide (1305-62-0)                 No   No   No    No
```

```
-----\Federal, State & International Regulations - Part 2\-----
Ingredient                                     CERCLA  -RCRA-  -TSCA-
261.33  8(d)
-----
Calcium Hydroxide (1305-62-0)                 No      No      No
```

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No
 Reactivity: No (Pure / Solid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: **3** Flammability: **0** Reactivity: **0**

Label Hazard Warning:

DANGER! HARMFUL IF SWALLOWED OR INHALED. CAUSES BURNS TO SKIN AND EYES. CAUSES SEVERE IRRITATION TO RESPIRATORY TRACT.

Label Precautions:

Do not get in eyes, on skin, or on clothing.

Wash thoroughly after handling.

Do not breathe dust.

Keep container closed.

Use only with adequate ventilation.

Label First Aid:

In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases call a physician immediately.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 8.

Disclaimer:

Mallinckrodt Baker, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. MALLINCKRODT BAKER, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MALLINCKRODT BAKER, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.

Prepared by: Environmental Health & Safety

Phone Number: (314) 654-1600 (U.S.A.)