



# SAFETY DATA SHEET

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## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Calcium nitrate tetrahydrate**  
PRODUCT NUMBER: 1389  
CAS NUMBER: 13477-34-4  
SYNONYMS: Calcium dinitrate tetrahydrate, nitric acid, calcium salt, tetrahydrate

### MANUFACTURER:

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## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

**Danger**

### Hazard Statements

H272	May intensify fire, oxidizer.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

### Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P221	Take any precaution to avoid mixing with combustibles.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P280	Wear eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352	IF ON SKIN: Wash with plenty of water.

### HMIS CLASSIFICATION:

Health: 2      Chronic: \*      Fire: 0      Reactivity Hazard: 1

### NFPA RATING:

Health: 2      Flammability: 0      Reactivity Hazard: 1      Special: OX

## SECTION 2 HAZARDS IDENTIFICATION (Cont.)

**EYE CONTACT:** May cause slight to mild irritation of the eyes.

**SKIN CONTACT:** May cause slight to mild irritation of the skin.

**INHALATION:** May be irritating to the nose, mucous membranes, and respiratory tract.

**INGESTION:** Ingestion may lead to dizziness, abdominal cramps, vomiting, bloody diarrhea, weakness, and convulsions.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula:  $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$

Molecular Weight: 236.15

CHEMICAL NAME	CAS#	%
Calcium Nitrate Tetrahydrate	13477-34-4	100

## SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

**SKIN EXPOSURE:** Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** Remove to fresh air and keep at rest. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

**INGESTION:** Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

## SECTION 5 FIREFIGHTING MEASURES

**FLASH POINT:** Product is not flammable

**AUTO IGNITION TEMPERATURE:** Not available

**EXPLOSION LIMITS:** Not available

**EXTINGUISHING MEDIUM:** Use fire fighting measures that suit the surrounding fire.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** Nitrogen oxides and calcium oxides.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid the formation of dust. Avoid breathing vapors, mist, gas, or dust.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spillage from entering drains or allowing to be released into the environment.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Pick up and arrange for disposal without creating dust. Sweep up and keep in suitable, closed containers for disposal.

## SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Wear appropriate personal protective equipment. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid formation of dust. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

**CONDITIONS FOR SAFE STORAGE:** Store in cool, dry, and well-ventilated area. Hygroscopic. Storage class (TRGS 510): Oxidizing hazardous materials.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

**EXPOSURE CONTROLS:** Contains no substances with occupational exposure limit values.

**EYE PROTECTION:** Wear chemical safety glasses or goggles and face shield.

**SKIN PROTECTION:** Wear nitrile or rubber gloves, apron, or lab coat.

**VENTILATION:** Provide local exhaust, preferably mechanical.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION (Cont.)

**RESPIRATOR:** Use an approved respirator.

**ADDITIONAL PROTECTION:** Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** Clear to white solid

**ODOR:** None

**MOLECULAR WEIGHT:** 236.15

**BOILING POINT:** 132° C (dec.)

**MELTING POINT:** 42°C

**SPECIFIC GRAVITY:** 1.82 gm/ml

**SOLUBILITY:** Soluble

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** Contact with strong reducing agents or organic matter. Some nitrates can explode if heated to high temperatures.

**INCOMPATIBILITY:** Reducing agents, organic matter, phosphorus, and sulfur.

**DECOMPOSITION PRODUCTS:** Nitrogen oxides and calcium oxides

## SECTION 11 TOXICOLOGICAL DATA

**ACUTE TOXICITY:** LD50 Oral – rat - >300 - <2,000 mg/kg. (OECD Test Guideline 423). Administration onto the skin (rabbit).

**CARCINOGENIC EFFECTS:** No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

**MUTAGENIC EFFECTS:** Not available

**TETRATOGENIC EFFECTS:** Not available

**RTECS:** CEW3000000

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

## SECTION 12 ECOLOGICAL DATA

**TOXICITY TO FISH:** LC50 – Oncorhynchus mykiss (rainbow trout) - > 98.9 mg/l – 96 h.

## SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

## SECTION 14 TRANSPORTATION DATA

UN1454

Calcium nitrate

Class 5.1

PG III

Marine Pollutant: No

## **SECTION 15 REGULATORY INFORMATION**

**TSCA:** Listed in the TSCA inventory

**SARA 302/304:** Not listed

**SARA (TITLE 313):** Not listed

**PENNSYLVANIA RIGHT TO KNOW:** Calcium nitrate tetrahydrate

**NEW JERSEY RIGHT TO KNOW:** Calcium nitrate tetrahydrate

**CALIFORNIA PROP. 65:** Not Listed

## **SECTION 16 OTHER INFORMATION**

**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

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