
Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identification:**Product Description:** Calcium nitrate tetrahydrate**Synonyms:** Calcium dini; Nitric acid, calcium salt, tetrahydrate**CAS-No:** 13477-34-4**EC-No.:** 233-332-1**Molecular Formula:** $\text{CaN}_2\text{O}_6 \cdot 4\text{H}_2\text{O}$ **REACH Registration No:** 01-2119495093-35-XXXX**1.2 Relevant identified uses of the substance or mixture and uses advised against:****Recommended Use:** Laboratory chemicals and Manufacture of substances**1.3 Details of the supplier of the safety data sheet:**

- **Company** **Finar Limited**
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad-382110, Gujarat, India.
Web: www.finarchemicals.com
- **E-Mail Address** safety.finar@aceto.com; info.finar@aceto.com

.4 Emergency Telephone Number:

For Emergency contact on: +91 - 2717 - 616 717

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
---------------------	-------------------------------------

SECTION 2: HAZARDS IDENTIFICATION**2.1. Classification of the substance or mixture:****Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 4), H302

Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label Elements:**Labeling according to Regulation (EC) No 1272/2008****Pictogram****Signal word: Danger****Hazard statement(s)**

H302 Harmful if swallowed.

H318 Causes serious eye damage.

Precautionary statement(s)

P280 Wear eye protection/ face protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

Rinse mouth.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/ doctor.

Supplemental Hazard Statements None

Reduced labelling (≤ 125 ml)**Pictogram****Signal word: Danger**

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
--------------	------------------------------

Hazard statement(s)

H318 Causes serious eye damage.

Precautionary statement(s)

P280 Wear eye protection/ face protection.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/ doctor.

Supplemental Hazard Statements: **None**

2.3. Other Hazards:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. **Substances:** Calcium nitrate tetrahydrate

3.2. **Mixtures:**

Component	CAS-No	EC-No.	Weight %
Calcium nitrate tetrahydrate	13477-34-4	233-332-1	>95

SECTION 4: FIRST AID MEASURES

4.1. **Description of first aid measures:**

- **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

- **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

- **If Contact with skin**

Wash off with soap and plenty of water. Consult a physician.

- **In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
---------------------	-------------------------------------

- **If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed:

No Data Available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable Extinguishing Media: Water spray. Dry chemical. Carbon dioxide (CO₂)

Unsuitable Extinguishing Media: Do not use halogenated extinguishing agents or foam

5.2. Special hazards arising from the substance or mixture:

Nitrogen oxides (NO_x)

Calcium oxide

Not combustible.

Fire may cause evolution of: nitrous gases, nitrogen oxides

Ambient fire may liberate hazardous vapours.

5.3. Advice for firefighters:

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further Information:

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2. Environmental precautions:

Do not let product enter drains.

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
---------------------	-------------------------------------

6.3. Methods and material for containment and cleaning up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4. Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Advice on safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Advice on protection against fire and explosion

Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities:

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Store in cool place. Hygroscopic.

Storage class

Storage class (TRGS 510): 13: Non Combustible Solids

7.3. Specific end use(s):

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Ingredients with workplace control parameters

8.2. Exposure Controls:

Appropriate Engineering Controls:

Personal Protective Equipment:

- Eye & Face Protection-**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
--------------	------------------------------

government standards such as NIOSH (US) or EN 166(EU).

- **Hand Protection -**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact: -

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact: -

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,

test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

- **Other Protective equipment-**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

- **Respiratory Protection-**

Where risk assessment shows air-purifying respirators are appropriate use a full face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.

If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
---------------------	-------------------------------------

- **Environmental Exposure Controls-**

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

- **Appearance:** White
- **Physical State:** Solid Crystalline
- **Odor:** Odorless
- **Odor Threshold:** No data available
- **pH:** 5 - 7 5% aq. sol
- **Melting Point:** 45°C
- **Critical Temperature:** No data available
- **Vapor Pressure:** No data available
- **Relative Vapor Density:** No data available
- **Specific Gravity:** 1.820
- **Auto-Ignition Temperature:** No data available
- **Ignition Temperature:** No data available
- **Volatility:** No data available
- **Bulk Density:** 1.100 kg/m³
- **Viscosity, dynamic:** No data available
- **Viscosity, Kinematic:** No data available
- **Water/Oil Dist. Co eff.:** No data available
- **Partition Co-efficient: n-octanol/Water:** No data available
- **Ionicity (in Water):** No data available
- **Lower Explosion Limit:** No data available
- **Upper Explosion Limit:** No data available
- **Boiling Point/Range:** 132°C
- **Flash Point:** No data available
- **Water Solubility:** Soluble

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
---------------------	-------------------------------------

9.2. Other information:

- **Molecular Formula:** CaN₂O₆ . 4 H₂ O
- **Molecular Weight:** 236.15 g/mol

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

No data available

10.2. Chemical stability:

Stable under recommended storage conditions. Hygroscopic.

10.3. Possibility of hazardous reactions:

No data available

10.4. Conditions to avoid:

Avoid contact with combustible material (paper, wool, oil).

Incompatible products. Exposure to moist air or water. Combustible material. Excess heat.

10.5. Incompatible materials:

Strong reducing agents, Combustible material, Strong bases

10.6. Hazardous decomposition products:

Nitrogen oxides (NO_x), Calcium oxides

In the event of fire : See section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute toxicity

LD50 Oral - Rat - > 300 - < 2.000 mg/kg (OECD Test Guideline 423)

Inhalation: No data available

Dermal: No data available

Skin irritation

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
---------------------	-------------------------------------

Eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes.

(OECD Test Guideline 405)

Sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further Information:

RTECS: EW3000000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to fish

LC50 - Oncorhynchus mykiss (rainbow trout) - > 98.9 mg/l - 96 h

12.2 Persistence and degradability:

The methods for determining the biological degradability are not applicable to inorganic substances.

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
---------------------	-------------------------------------

12.3 Bioaccumulate potential:

No data available

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects:

Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of drinking- water supplies. Discharge into the environment must be avoided.

No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods:****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste.

Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
--------------	------------------------------

SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	1454		
14.2 Proper shipping name	CALCIUM NITRATE		
14.3 Class	5.1		
14.4 Packing group	III		
14.5 Environmentally hazardous	No		
14.6 Special precautions for user	No Data Available		
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code			
Not Relevant			

SECTION 15: Regulatory information

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

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the : Not applicable
 European Parliament and of the Council on the
 control of major-accident hazards involving dangerous substances.

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment:

For this product a chemical safety assessment was not carried out.

Safety Data Sheet

Product Name	Calcium nitrate tetrahydrate
--------------	------------------------------

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

Training advice

Provide adequate information, instruction and training for operators.

References: Not available

Created: 03/03/2022

- **Disclaimer:**

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