

Product Name	Calcium Chloride dihydrate
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:

Product Description: Calcium chloride dihydrate

Synonyms: No Data Available

CAS-No: 10035-04-8

EC-No.: 640-414-4

Molecular Formula: $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$

REACH Registration No: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Recommended Use: Laboratory chemicals, pharmaceutical production, Used as an excipient and a biopharma ingredient

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@actylis.com; info.finar@actylis.com

1.4. Emergency Telephone Number:

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

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008

Eye irritation, Category 2, H319

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

2.2. Label Elements:

Labeling according Regulation (EC) No 1272/2008

Pictogram



Signal word: **Warning**

Hazard statement(s)

H319 Causes serious eye irritation.

Precautionary statement(s)

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

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

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 chloride dihydrate

3.2. Mixtures:

Component	CAS-No	EC-No.	Weight %
Calcium chloride dihydrate	10035-04-08	640-414-4	> 95

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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**

Move to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Obtain medical attention. If not breathing, give artificial respiration.

- **If Contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

- **In case of eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Get medical attention.

- **If swallowed**

Do not induce vomiting. Obtain medical attention.

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

Irritant effects, Stomach/intestinal disorders

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

No information Available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable Extinguishing Media- Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media- For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture:

Not Combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of: Hydrogen chloride gas, Calcium oxide.

5.3. Advice for firefighters:

Special protective equipment for firefighters:

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe

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distance or by wearing suitable protective clothing.

5.4 Further Information:

Suppress (knock down) gases/vapours/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 vapours, mist or gas.

Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

6.2. Environmental precautions:

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities:

Keep containers tightly closed in a dry and well-ventilated place.

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:

Components with workplace control parameters

8.2. Exposure Controls:

Appropriate Engineering Controls:

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Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7.1.

Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye & Face Protection-

Safety glasses

Hand Protection –

Full contact:

Glove Material: Nitrile Rubber

Glove Thickness: 0.11 mm

Break Through Time: >480 min

Splash contact:

Glove Material: Nitrile Rubber

Glove Thickness: 0.11 mm

Break Through Time: >480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Body Protection

Protective clothing.

Respiratory Protection

Required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances.

Environmental Exposure Controls

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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9.1. Information on basic physical and chemical properties:

- **Appearance:** Crystalline- White
- **Physical State:** Solid
- **Odor:** Odorless
- **Odor Threshold:** No data available
- **pH:** 4.5-6.5 100 g/l aq. Sol
- **Melting Point:** 176 °C
- **Critical Temperature:** No data available
- **Vapor Pressure:** 0.01 hPa at 20 °C
- **Relative Density:** 1.850 g/cm³
- **Density:** 1.85 g/cm³ at 20 °C
- **Auto-Ignition Temperature:** No data available
- **Decomposition Temperature:** No data available
- **Volatility:** No data available
- **Bulk Density:** No data available
- **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:** No data available
- **Specific Gravity:** 0.830
- **Flash Point:** No data available
- **Water Solubility:** 147 g/l at 20 °C completely soluble

9.2. Other information:

Molecular Formula: CaCl₂·2H₂O

Molecular Weight: 147.02 g/mol

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity:**

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Exothermic dissolution process with water.

10.2. Chemical stability:

The product is chemically stable under standard ambient conditions (room temperature). .

10.3. Possibility of hazardous reactions:

Exothermic reaction with: boron trifluoride, vinyl methyl ether, Water

Generates dangerous gases or fumes in contact with: Metals, Zinc

10.4. Conditions to avoid:

Incompatible products. Excess heat. Avoid dust formation. Exposure to moist air or water.

10.5. Incompatible materials:

Strong acids, Borane/boron oxides, Zinc, Calcium oxide, Methyl vinyl ether, Calcium chloride is attacked by bromine trifluoride.

10.6. Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Calcium oxide.

In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral toxicity

LD50 Oral - Rabbit - male - 500 - 1.000 mg/kg

(OECD Test Guideline 401)

Remarks: (anhydrous substance)

Acute inhalation toxicity

Inhalation: Irritating to respiratory system.

Acute dermal toxicity

LD50 Dermal - Rabbit - male and female - > 5.000 mg/kg

Remarks: (anhydrous substance) (ECHA)

Skin irritation

Skin: Rabbit

Result: No skin irritation- 4h

(OECD Test Guideline 404)

Remarks: (anhydrous substance)

Eye irritation

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Eye: Rabbit

Result: Moderate eye irritations

(OECD Test Guideline 405)

Remarks: (anhydrous substance)

Sensitisation

No data available

Germ cell mutagenicity

Ames test

S. typhimurium

Result: negative

Mutagenicity (mammal cell test): chromosome aberration.

Chinese hamster fibroblasts

Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure

No data available

Acute oral toxicity - After uptake of large quantities:, Stomach/intestinal disorders, Nausea

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further Information:

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

Other dangerous properties cannot be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: ECOLOGICAL INFORMATION

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12.1. Toxicity:**Toxicity to fish**

Static test LC50 - Pimephales promelas (fathead minnow) - 4.630 mg/l - 96 h

(US-EPA)

Remarks: (anhydrous substance)

Toxicity to daphnia and other aquatic invertebrates

Static test EC50 - Daphnia magna (Water flea) - 2.400 mg/l - 48 h

(OECD Test Guideline 202)

Remarks: (anhydrous substance)

Toxicity to algae

EC50 - Pseudokirchneriella subcapitata - 2.900 mg/l - 72 h

(OECD Test Guideline 201)

Remarks: (anhydrous substance)

Toxicity to bacteria

No data available

12.2 Persistence and degradability:

The methods for determining biodegradability are not applicable to inorganic substances.

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:

Additional ecological information

Discharge into the environment must be avoided.

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

Product

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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.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	Not classified as dangerous in the meaning of transport regulations.		
14.2 Proper shipping name	Not classified as dangerous in the meaning of transport regulations.		
14.3 Class	Not classified as dangerous in the meaning of transport regulations.		
14.4 Packing group	Not classified as dangerous in the meaning of transport regulations.		
14.5 Environmentally hazardous	Not classified as dangerous in the meaning of transport regulations.		
14.6 Special precautions for user	Not classified as dangerous in the meaning of transport regulations.		

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

National legislation

Storage class 10 - 13

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

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

H319 Causes serious eye irritation.

Training advice

Provide adequate information, instruction and training for operators.

Labeling**Pictogram**

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Signal word: **Warning**

Hazard statement(s)

H319 Causes serious eye irritation.

Precautionary statement(s)

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

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

References: Not available

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Disclaimer:

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