



MATERIAL SAFETY DATA SHEET

PRODUCT:
CALCIUM NITRATE 4-HYDRATE

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product:

Product Name: Calcium Nitrate 4-hydrate

Alternate Name(s): --

Use of the product/preparation:

Chemical production and analysis, Fertilizer, laboratory reagent

Company/undertaking identification:

Company Name: Phine Kemikals India,
Plot No.1, 2, 3 & 90, GIDC Estate, Godhra-389001 India
Emergency Phone No: +91-2672-262884, +91-98240 63593
E-mail ID: info@phinekem.in

2. Composition/information on ingredients

M: 236.15 g/mol

Formula Hill: $\text{CaN}_2\text{O}_6 \cdot 4\text{H}_2\text{O}$

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

Composition	Concentration
Calcium Nitrate 4-hydrate	> 98%
Calcium	>16.5%
Nitrogen	>11.5%
Water content	>29%
CAS No	13477-34-4
EC No	233-332-1



3. Hazards identification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification

Acute toxicity – Oral Category 4
Serious eye damage/eye irritation Category 1

Label elements

Signal word	Danger
Hazard statements	HARMFUL IF SWALLOWED Causes serious eye damage
Symbols/Pictograms	  <p>GHS07-Harmful GHS07-Corrosive</p>
Precautionary Statements – Prevention	Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection
Precautionary Statements – Response	IF exposed or concerned: Get medical advice/attention IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Precautionary Statements - Disposal	Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)	Not applicable

4. First aid measures

- After inhalation: Fresh air.
- After skin contact: Wash off with plenty of water. Remove contaminated clothing.
- After eye contact: Rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.
- After swallowing: Immediately make victim drink plenty of water, induce vomiting. Call in physician.

5. Fire-fighting measures

Suitable extinguishing media:
Water spray, Dry chemical, CO₂ or Foam type. Select in adoption to materials stored in the immediate neighbourhood

Special risks:
Non-combustible. Fire-promoting substance- Development of hazardous combustion gases or vapours

Special protective equipment for fire fighting:

Do not stay in dangerous zone without self-contained breathing apparatus.

Other information:

Prevent fire-fighting water from entering surface water or ground water.

6. Accidental release measures

Person-related precautionary measures:

Avoid generation of dust: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:

Do not allow to enter sewerage system.

Procedures for cleaning / absorption:

Take up dry. Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. Dry. Ambient temperature below 43°C. Away from combustible materials and sources of ignition and heat

8. Exposure controls/personal protection

Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on the concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when dusts are generated.

Eye protection: required

Hand protection: In full contact & splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm

Industrial hygiene:

Change contaminated clothing. Wash hands and face after working with substance.

9. Physical and chemical properties

Form: solid

Colour: colourless

Odour: odourless

pH value at 50 g/l H ₂ O	(25°C)	3.0 – 7.0
Melting point		43°C
Boiling point		Not applicable
Ignition temperature		not combustible
Flash point		not flammable
Explosion limits	lower	not applicable
	upper	not applicable
Density	(20°C)	1.82 g/cm ³
Bulk density		~1000 kg/m ³
Solubility in water	(40°C)	~2710 g/l
Thermal decomposition		> 130 °C (release of water of crystallization)

10. Stability and reactivity

Conditions to be avoided

No information available

Substances to be avoided

none

Hazardous decomposition products

In the event of fire. See chapter 5

Further information

releases water of crystallization when heated.

11. Toxicological information

Acute toxicity

LD₅₀ (oral, rat): >3900 mg/kg

Subacute to Chronic toxicity

Experience to man. No sensitizing effect.

Bacterial mutagenicity: Ames Test: Negative

Further toxicological information

After skin contact: Slight irritation.

After eye contact: Irritations.

After swallowing: nausea and vomiting

After inhalation of dust: Irritation symptoms in the respiratory tract.

Further data

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

12. Ecological information

Biologic degradation:

Methods for the determination of biodegradability are not applicable to inorganic substances.

Ecotoxic effects:

Quantitative data on the ecological effect of this product is not available.

Biological effects: Fish Toxicity: LC50: >500 mg/l

Further ecological data:

No ecological problems are to be expected when the product is handled and used with due care and attention.

13. Disposal considerations**Product:**

Chemicals must be disposed of in compliance with the respective national regulations.

Packaging

Product packaging must be disposed of in compliance with the respective national regulations or must be passed to a packaging return system, if available.

14. Transport information**DOT (Road & Rail)**

UN Number	UN1454
Proper Shipping Name	CALCIUM NITRATE
Hazard Class	5.1
Packing Group	III

IMDG/IMO (Sea)

UN Number	UN1454
Proper Shipping Name	CALCIUM NITRATE
Hazard Class	5.1
Packing Group	III

15. Regulatory information***Labeling according to EC Directives:***

Symbol	O	Oxidizing
	Xi	Irritant
R-phrases	8-36	Contact with combustible material may cause fire. Irritating to eyes
S-phrases	---	

OSHA Status: This product is non-hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Chemical Inventory: This compound is on the EPA Toxic Substance Control Act (TSCA) inventory List.

California Proposition 65: To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects or other reproductive effects.

SARA Title III:	Section 302 Extremely Hazardous Substances:	None
	Section 302 Extremely Hazardous Substances:	None
	Toxic Chemicals:	None

16. Other information

HIMS Rating	Health	2
	Flammability	0
	Reactivity	0
	Personal Protection	D

Reason for alteration

Release 1: Original

Regional representation:

India: given in Chapter 1 (company identification)

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.