

SHANXI KNLAN TECH CO., LTD.  
Material Safety Data Sheet  
CALCIUM NITRATE TETRAHYDRATE

Revision date: 06/09/2025

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## 1. Product And Company Identification

**Manufacturer:** ShanXi Dongjin Industry Fertilizer Co , Ltd.  
**Product Identifier:** CALCIUM NITRATE TETRAHYDRATE  
**CAS No.:** 13477-34-4  
**Molecular Weight:** 236.15  
**Chemical Formula:** Ca(NO3)2 4H2O

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## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
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Calcium Nitrate Tetrahydrate	13477-34-4	100%	No

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## 3. Hazards Identification

### Emergency Overview

CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. HARMFUL IF SWALLOWED OR INHALED.

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Health Rating: 1 - Slight  
Flammability Rating: 0 - None  
Contact Rating: 2 - Moderate  
Lab Protective Equip: GOGGLES; LAB COAT  
Storage Color Code: Yellow (Reactive)

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GHS Label elements



Signal Word:

DANGER

Hazard statements:

H370 Causes damage to organs

H372 ery toxic to aquatic life with long lasting effects

## Potential Health Effects

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### **Inhalation:**

Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

### **Ingestion:**

Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

### **Skin Contact:**

Causes irritation to skin. Symptoms include redness, itching, and pain.

### **Eye Contact:**

Causes irritation, redness, and pain.

### **Chronic Exposure:**

No information found.

### **Aggravation of Pre-existing Conditions:**

No information found.

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## 4. First Aid Measures

### **Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### **Ingestion:**

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

### **Skin Contact:**

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if symptoms occur.

### **Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

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## 5. Fire Fighting Measures

**Fire:**

Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

**Explosion:**

Can cause explosions in contact with combustible dusts or vapors; occasionally explosive by shock or friction. Sensitive to mechanical impact.

**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. Water spray may be used to keep fire exposed containers cool.

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## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Small amounts of residue may be flushed to sewer with plenty of water.

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## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. 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.

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## 8. Exposure Controls/Personal Protection

**Airborne Exposure Limits:**

None established.

**Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. 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):**

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. 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-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**

Wear protective gloves and clean body-covering clothing.

**Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

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## 9. Physical and Chemical Properties

**Physical state:** Solid

**Molecular formula:** No data available

**Appearance:** white crystal

**Molecular weight:** No data available

**PH value:** No data available

**Viscosity:** No data available

**Relative density (water=1):** No data available

**Melting point ( °C ) :** No data available

**Vapor density (air=1):** No data available

**Boiling point { °C } :** No data available

**Ignition point ( °C ) :** No data available

**Flash point ( °C ) :** No data available

**Upper explosive limit% (V/V):** No data available

**Lower explosive limit% (V/V):** No data available

**Heat Of Combustion (kJ/mol) :** No data available

**Vapour pressure (kPa):** No data available

**Critical temperature ( °C ) :** No data available

**Critical pressure (MPa):** No data available

**N-octanol / water partition coefficient:** No data available

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## 10. Stability and Reactivity

**Stability:** Stable under normal use and storage conditions

**Incompatible materials:** No data available

**Conditions to avoid:** No data available

**Polymerization hazards:** No data available

**Hazardous decomposition products:** No data available.

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## 11. Toxicological Information

Oral rat LD50: 3900 mg/kg. Irritation eye rabbit 500mg/24H severe.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Calcium Nitrate Tetrahydrate	No	No	None

## 12. Ecological Information

### Environmental Fate:

No information found.

### Environmental Toxicity:

The LC50/96-hour values for fish are over 100 mg/l.

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. 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

UN number: /

UN proper shipping name: /

Transport hazard class(es): /

Risk labels: /

Marine pollutant(Yes/No): /

Packing group: /

**Special precautions in connection with transport or conveyance:** When transport starts, packaging should be complete and loading should be safe. During transport, ensure that the container does not leak, break down, fall or shatter. Do not pack or transport it with strong oxidants. During transport, do not expose it to sunlight, rain or high temperature. Tanks or vessels used in the transport must not be used to carry other substances, unless they have been thoroughly cleaned and disinfected.

## 15. Regulatory Information

Regulations on the Control over Safety of Dangerous Chemicals (Decree No. 591 of the State Council of the People's Republic of China), taking effect from December 1 of 2011 on;  
The Regulation on Work Safety Licenses (adopted at the 34th executive meeting of the State Council on January 7, 2004 ; Law of the People' s Republic of China on Work Saf ety (adopted at the 28th Meeting of the Standing Committee of the Ninth National People's Congress on June 29, 2002); The Code of Occupational Disease Prevention of PRC (adopt ed in the 24th Meeting of the Standing Committee of the Ninth People' s Congress on October 27, 2001) ; Env ironment al Protection Law of the People's Republic of China (adopted at t he 11th Meeting of t he St anding Committee of the Sevent h National People' s Congr ess on December 26,1989) ; Rules of Dangerous Good Trans por t Management (i ssued in 1995 by Ministr y of Ra ilways of PRC); GBZ 2. 1- 2019 Occupational exposure limits for ha zardous agents in the workplace Pa r t 1: Chemical hazardous agents ; Recommendations on the Transport of Dangerous Goods - Model Regulations ; Globally Harmonized System of Classification and Labeling of Chemical s (GHS) ; GB/ T 16483-2008 Safety dat a s heet for chemical productsContent and order of sections ; Inventory of Dangerous Chemical Substances (2015 version).

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## 16. Other Information

References: Recommendations on the Transport of Dangerous Goods -Model Regulations  
Globally Harmonized System of Classification and Labelling of Chemicals (GHS)  
International Programme on Chemical Safety (Chinese Version)

Date: Sep 06, 2025

on behalf of  
SHANKI DONGJIN FERTILIZER INDUSTRY CO., LTD.  
山西东锦肥业有限公司  
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Signature (s)