SDS

永华化学股份有限公司
YONGHUA CHEMICAL CO., LTD.

Calcium nitrate

1. Product Identification

Synonyms: Nitric acid, calcium salt, tetrahydrate; Norwegian saltpeter tetrahydrate; Calcium dinitrate tetrahydrate; Lime nitrate tetrahydrate; Nitrocalcite tetrahydrate; Lime saltpeter tetrahydrate

CAS No.: 13477-34-4

Manufacturer/supplier:

Yonghua Chemical Co., Ltd.

Address: Xiangqiao Village, Zhitang(Heshi)Town, Changshu City 215500,

Jiangsu Province, China

Emergency phone：0086 512 52549653

Website：www.yonghuareagents.com

2. Composition/Information on Ingredients

CAS No.	Chemical Name	Content	EINECS#
13477-34-4	Calcium nitrate	⩽100	233-332-1

Hazard Symbols: XI O

Risk Phrases: 36 8

3. Hazards Identification

EMERGENCY OVERVIEW

Irritating to eyes. Contact with combustible material may cause fire.Hygroscopic (absorbs moisture from the air).

Potential Health Effects

Eye:

Causes eye irritation.

Skin:

May cause skin irritation.

Ingestion:

May cause digestive tract disturbances. Ingestion of nitrate containing compounds can lead to methemoglobinemia.

Inhalation:

May cause respiratory tract irritation. May cause methemoglobinemia.

Chronic:

May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death.

4. First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin:

In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood.

5. Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire. Containers may explode in the heat of a fire. May decompose explosively when heated or involved in a fire. May accelerate burning if involved in a fire.

Extinguishing Media:

Cool containers with flooding quantities of water until well after fire is out. For small fires, do NOT use dry chemicals, carbon dioxide, halon or foams. USE WATER ONLY. For large fires flood fire with water from a distance.

6. Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

Keep combustibles (wood, paper, oil, etc.,) away from spilled material.

7. Handling and Storage

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep from contact with clothing and other combustible materials. Avoid breathing dust. Inform laundry personnel of contaminant's hazards.

Storage:

Do not store near combustible materials. Keep away from reducing agents. Keep containers tightly closed. Avoid storage on wood floors.

---

8. Exposure Controls/Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits CAS# 10124-37-5: CAS# 13477-34-4: Personal Protective Equipment Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

---

9. Physical and Chemical Properties

Physical State: Crystals

Color: white

Odor: odorless

pH: Not available.

Vapor Pressure: Negligible.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 45 deg C

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: 132 deg C

Solubility in water: Soluble.

Specific Gravity/Density: 1.82

Molecular Formula: Ca(NO3)2.4H2O

Molecular Weight: 236.15

---

10. Stability and Reactivity

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions. Deliquescent (tending to absorb atmospheric water vapor and become liquid).

Conditions to Avoid:

Mechanical shock, dust generation, moisture, excess heat.

Incompatibilities with Other Materials:

Strong reducing agents, ammonia, finely powdered metals, hydrazine, organic materials, combustible materials.

Hazardous Decomposition Products:

Oxides of nitrogen, calcium oxide.

Hazardous Polymerization: Has not been reported.

---

11. Toxicological Information

RTECS#:

CAS# 13477-34-4: EW3000000 LD50/LC50:

CAS# 13477-34-4: Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, skin: 500 mg/24H Mild; Oral, rat: LD50 = 3900 mg/kg.

Carcinogenicity:

Calcium nitrate tetrahydrate - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

---

12. Ecological Information

---

13. Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

---

14. Transport Information

IATA

Shipping Name: CALCIUM NITRATE

Hazard Class: 5.1

UN Number: 1454

Packing Group: III

IMO

Shipping Name: CALCIUM NITRATE

Hazard Class: 5.1

UN Number: 1454

Packing Group: III

RID/ADR

Shipping Name: CALCIUM NITRATE

Hazard Class: 5.1

UN Number: 1454

Packing group: III

15.Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: O

Risk Phrases:

R 8 Contact with combustible material may cause

fire.

Safety Phrases:

S 17 Keep away from combustible material.

WGK (Water Danger/Protection)

CAS# 13477-34-4: 1

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

None of the chemicals in this product are listed on the DSL/NDSL list.

CAS# 13477-34-4 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

US FEDERAL

TSCA

CAS# 13477-34-4 is not on the TSCA Inventory because it is a hydrate.

It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

---

16. Other Information

Yonghua Chemical Co., Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

****

Prepared by:

Yonghua Chemical Co., Ltd.
TEL: 86-512-52549999
FAX: 86-512-52546337