

## SAFETY DATA SHEET

Creation Date 11-Oct-2011

Revision Date 16-Jun-2019

Revision Number 2

### 1. Identification

**Product Name** Calcium nitrate tetrahydrate

**Cat No. :** C2530

**Synonyms** Calcium dini; Nitric acid, calcium salt, tetrahydrate; Norwegian saltpeter tetrahydrate

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

**Company**

Lab Alley LLC  
22111 Highway 71 West, Suite 601  
Spicewood, Texas 78669  
512-668-9918

### 2. Hazard(s) identification

**Classification**

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

Oxidizing solids	Category 3
Acute oral toxicity	Category 4
Serious Eye Damage/Eye Irritation	Category 1

**Label Elements**

**Signal Word**

Danger

**Hazard Statements**

May intensify fire; oxidizer  
Harmful if swallowed  
Causes serious eye damage



**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  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 Keep/Store away from clothing/ other combustible materials  
 Take any precaution to avoid mixing with combustibles

**Eyes**

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 or doctor/physician

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

**Fire**

In case of fire: Use CO2, dry chemical, or foam for extinction

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition / information on ingredients

Component	CAS-No	Weight %
Calcium nitrate tetrahydrate	13477-34-4	>95
Calcium nitrate	10124-37-5	-

### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.
<b>Inhalation</b>	Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention.
<b>Ingestion</b>	Do not induce vomiting. Obtain medical attention.
<b>Most important symptoms/effects Notes to Physician</b>	Causes eye burns. Treat symptomatically

### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Water.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point Method -</b>	No information available No information available
<b>Autoignition Temperature</b>	
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Oxidizing Properties</b>	Oxidizer

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

### Specific Hazards Arising from the Chemical

Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.).

### Hazardous Combustion Products

Nitrogen oxides (NO<sub>x</sub>)

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

**Health**  
2

**Flammability**  
0

**Instability**  
1

**Physical hazards**  
OX

## 6. Accidental release measures

### Personal Precautions

Use personal protective equipment. Ensure adequate ventilation.

### Environmental Precautions

See Section 12 for additional ecological information.

### Methods for Containment and Clean Up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep combustibles (wood, paper, oil, etc) away from spilled material. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

### Handling

Avoid contact with skin and eyes. Do not breathe dust. Minimize dust generation and accumulation. Wash hands before breaks and immediately after handling the product. Keep away from clothing and other combustible materials.

### Storage

Do not store near combustible materials. Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls / personal protection

### Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

#### Eye/face Protection

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 and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory Protection

No protective equipment is needed under normal use conditions.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

**Physical State**  
**Appearance**

Solid  
White

Odor	Odorless
Odor Threshold	No information available
pH	5-7 5% aq.sol
Melting Point/Range	45 °C / 113 °F
Boiling Point/Range	132 °C / 269.6 °F
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Relative Density	1.860
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	Ca N <sub>2</sub> O <sub>6</sub> . 4 H <sub>2</sub> O
Molecular Weight	236.15

## 10. Stability and reactivity

<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Hygroscopic. Oxidizer: Contact with combustible/organic material may cause fire.
<b>Conditions to Avoid</b>	Incompatible products. Exposure to moist air or water. Combustible material. Excess heat.
<b>Incompatible Materials</b>	Strong acids, Strong reducing agents, Combustible material
<b>Hazardous Decomposition Products</b>	Nitrogen oxides (NO <sub>x</sub> )
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium nitrate tetrahydrate	300-2000 mg/kg (Rat)	Not listed	Not listed
Calcium nitrate	302 mg/kg (Rat)	Not listed	Not listed

**Toxicologically Synergistic Products** No information available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Irritation</b>	Irritating to eyes, respiratory system and skin
<b>Sensitization</b>	No information available
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Calcium nitrate tetrahydrate	13477-34-4	Not listed	Not listed	Not listed	Not listed	Not listed
Calcium nitrate	10124-37-5	Not listed	Not listed	Not listed	Not listed	Not listed

<b>Mutagenic Effects</b>	Not mutagenic in AMES Test
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	None known
<b>STOT - repeated exposure</b>	None known
<b>Aspiration hazard</b>	No information available
<b>Symptoms / effects,both acute and delayed</b>	No information available
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Calcium nitrate	Not listed	10000 mg/L LC50 96 h	Not listed	2355 mg/L LC50 = 120 h

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

<b>UN-No</b>	UN1454
<b>Proper Shipping Name</b>	CALCIUM NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

### TDG

<b>UN-No</b>	UN1454
<b>Proper Shipping Name</b>	CALCIUM NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

### IATA

<b>UN-No</b>	UN1454
<b>Proper Shipping Name</b>	CALCIUM NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

### IMDG/IMO

<b>UN-No</b>	UN1454
<b>Proper Shipping Name</b>	CALCIUM NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

## 15. Regulatory information

## International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Calcium nitrate tetrahydrate	-	-	-	-	-		X	X	X	X	-
Calcium nitrate	X	X	-	233-332-1	-		X	X	X	X	X

## Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

## U.S. Federal Regulations

TSCA 12(b) Not applicable

## SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Calcium nitrate tetrahydrate	13477-34-4	>95	1.0
Calcium nitrate	10124-37-5	-	1.0

## SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

Clean Water Act Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration  
Not applicableCERCLA  
Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

## State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Calcium nitrate tetrahydrate	-	X	-	X	-
Calcium nitrate	-	X	-	X	-

## U.S. Department of Transportation

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class**

- C Oxidizing materials
- D2A Very toxic materials
- D1B Toxic materials
- E Corrosive material

**16. Other information**

**Prepared By** Regulatory Affairs  
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**Creation Date** 11-Oct-2011  
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**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**