

Section 1. Product and Company Identification

**Product Name** Calcium Nitrate  
**CAS Number** 15245-12-2

**Parchem - fine & specialty chemicals**  
**415 Huguenot Street**  
**New Rochelle, NY 10801**  
☎ (914) 654-6800 📠 (914) 654-6899  
🌐 [parchem.com](http://parchem.com) ✉ [info@parchem.com](mailto:info@parchem.com)

EMERGENCY RESPONSE NUMBER  
CHEMTEL  
Toll Free US & Canada: 1 (800) 255-3924  
All other Origins: 1 (813) 248-0585  
Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.  
This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

**Classification of the chemical:**

Acute Oral Toxicity - Category 4  
Eye Damage - Category 1

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER

**Hazard and precautionary statements**

**Hazard Statements**

H302 Harmful if swallowed.  
H318 Causes serious eye damage.

**Precautionary Statements**

**Prevention**

P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink, or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.



**Response**

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330 Rinse mouth.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

**Storage**

No storage statements.

**Disposal**

P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

**Poisons Schedule (SUSMP):** None allocated.

Section 3. Composition / Information on Ingredients

**Common Name** Calcium Nitrate  
**Synonym(s)** Nitric Acid, Ammonium Calcium Salt  
**CAS Number** 15245-12-2

COMPONENT	CAS NUMBER	CONCENTRATION
Water of crystallization	7732-18-5	> 12%
Nitric Acid, Ammonium Calcium Salt	15245-12-2	To 100%

Section 4. First Aid Measures

For advice, contact a Poisons Information Center (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

**Inhalation:** Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

**Skin Contact:** If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice. Nitrates can be absorbed through cut, burnt or broken skin. Launder contaminated clothing before reuse.

**Eye Contact:** Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical center.

**Ingestion:** Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

**Indication of immediate medical attention and special treatment needed:**

Treat symptomatically. Can cause corneal burns. Treat as for exposure to nitrates. May cause methemoglobinemia.

Clinical findings: The smooth muscle relaxant effect of nitrate salts may lead to headache, dizziness and marked hypotension.

Cyanosis is clinically detectable when approximately 15% of the haemoglobin has been converted to methaemoglobin (ie. ferric iron).

Symptoms such as headache, dizziness, weakness and dyspnoea occur when methaemoglobin concentrations are 30% to 40%; at levels of about 60%, stupor, convulsions, coma and respiratory paralysis occur and the blood is a chocolate brown color. At higher levels death may result. Spectrophotometric analysis can determine the presence and concentration of methaemoglobin in blood.

### Treatment

1. Give 100% oxygen.
2. In cases of (a) ingestion: use gastric lavage, (b) contamination of skin (unburnt or burnt): continue washing to remove salts.
3. Observe blood pressure and treat hypotension if necessary.
4. When methaemoglobin concentrations exceed 40% or when symptoms are present, give methylene blue 1 to 2 mg/kg body weight in a 1% solution by slow intravenous injection. If cyanosis has not resolved within one hour a second dose of 2 mg/kg body weight may be given. The total dose should not exceed 7 mg/kg body weight as unwanted effects such as dyspnoea, chest pain, vomiting, diarrhea, mental confusion, and cyanosis may occur. Without treatment methaemoglobin levels of 20 - 30% revert to normal within 3 days.
5. Bed rest is required for methaemoglobin levels in excess of 40%.
6. Continue to monitor and give oxygen for at least two hours after treatment with methylene blue.
7. Consider transfer to center where haemoperfusion can be performed to remove the nitrates from the blood if the condition of the patient is unstable.
8. Following inhalation of oxides of nitrogen the patient should be observed in hospital for 24 hours for delayed onset of pulmonary oedema. Further observation for 2 - 3 weeks may be required to detect the onset of the inflammatory changes of bronchiolitis fibrosa obliterans.

### Section 5. Firefighting Measures

**Suitable Extinguishing Media:** Not combustible, however, if material is involved in a fire use: Water jets. Water spray (large quantities).

**Unsuitable Extinguishing Media:** Dry powder. Carbon dioxide. Halogens. Foam.

**Specific hazards arising from the chemical:** Non-combustible, but will support combustion of other materials.

**Special protective equipment and precautions for firefighters:** Not combustible, however will support the combustion of other materials. Increases intensity of a fire. Decomposes on heating emitting toxic fumes, including those of oxides of nitrogen. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. Keep containers cool with water spray.



Section 6. Accidental Release Measures

**Emergency procedures/Environmental precautions:** Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

**Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:** Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal.

Section 7. Handling and Storage

**Precautions for safe handling:** Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation. Do not reuse container. When using do not eat, drink, or smoke. After use and before eating, drinking, or smoking, wash hands, arms and face thoroughly with soap and water.

**Conditions for safe storage, including any incompatibilities:** Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

Section 8. Exposure Controls / Personal Protection

**Control Parameters:** No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for particulates:  
Dusts not otherwise classified: 8hr TWA = 10 mg/m<sup>3</sup>  
As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.  
TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Appropriate engineering controls:** Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Keep containers closed when not in use. If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.



**Individual protection measures, such as Personal Protective Equipment (PPE):** The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors. OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.

Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

#### Section 9. Physical and Chemical Properties

**Physical state:** Granules  
**Color:** White  
**Odor:** Odorless  
**Solubility:** Soluble in water.  
**Specific Gravity:** 1000 - 1100 kg/m<sup>3</sup> (Bulk density)  
**Relative Vapor Density (Air = 1):** Not available  
**Vapor Pressure (20°C):** Not available  
**Flash Point:** Not applicable  
**Flammability Limits:** Not applicable  
**Auto-ignition Temperature:** Not applicable  
**Melting Point/Range:** 94 - 98°C  
**pH:** 5 - 7 (10% Aqueous solution)

#### Section 10. Stability and Reactivity

**Reactivity:** No information available.  
**Chemical stability:** Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.  
**Possibility of hazardous reactions:** Hazardous polymerization will not occur.  
**Conditions to avoid:** Avoid exposure to heat, sources of ignition, and open flame. Avoid dust generation. Avoid contact with organic materials, oils, greases. Avoid contact with combustible chemicals.  
**Incompatible materials:** Incompatible with acids, alkalis, reducing agents.  
**Hazardous decomposition products:** Oxides of nitrogen.

#### Section 11. Toxicological Information

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:



**Ingestion:** Swallowing can result in nausea, vomiting, diarrhea, and abdominal pain. Swallowing large amounts may result in headaches, dizziness and a reduction in blood pressure (hypotension).

**Eye contact:** A severe eye irritant. Contamination of eyes can result in permanent injury.

**Skin contact:** Contact with skin may result in irritation. Can be absorbed through cut, broken, or burnt skin with resultant adverse effects.

**Inhalation:** Breathing in dust may result in respiratory irritation. Absorption of nitrates by inhalation, ingestion or through burnt or broken skin may cause dilation of blood vessels by direct smooth muscle relaxation and may also cause methaemoglobinaemia.

**Acute toxicity**

Oral LD50 (rat): 500 mg/kg

Dermal LD50 (rat): > 2000 mg/kg

**Serious eye damage/irritation:** Severe irritant (rabbit).

**Respiratory or skin sensitization:** Not a skin sensitizer.

**Chronic effects:** Not carcinogenic. Non-mutagenic. No evidence of reproductive effects were found in animal studies.

Following the ingestion of nitrates in humans and animals methaemoglobinaemia has occurred.

Section 12. Ecological Information

**Ecotoxicity:** Avoid contaminating waterways.

48hr EC50 (Daphnia magna): > 100 mg/L

48hr LC50 (fish): 447 mg/L (Labeo boga; fresh water)

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**Road and Rail Transport:** Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

**Marine Transport:** Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

**Air Transport:** Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.



Section 15. Regulatory Information

**Classification:** This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

**Classification of the chemical**

Acute Oral Toxicity - Category 4

Eye Damage - Category 1

**Hazard Statements**

H302 Harmful if swallowed.

H318 Causes serious eye damage.

**Poisons Schedule (SUSMP):** None allocated.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Section 16. Other Information

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

REVISION DATE: 3/24/2017

