

## Calcium Ammonium Nitrate

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Calcium ammonium nitrate
<b>Other Means of Identification</b>	Calcium nitrate, ENVIROFLOC, Calcium ammonium nitrate double salt
<b>Recommended Use</b>	For industrial use.
<b>Restrictions on Use</b>	n/a
<b>Initial Supplier Identifier</b>	Integrity Chemical Solutions Inc. 205 Crystal Shores Drive, Okotoks, Alberta, T1S 2L1
<b>Emergency Telephone Number</b>	403.988.7695

### SECTION 2. HAZARD IDENTIFICATION

<b>Classification</b>	Acute toxicity, Oral – Category 4. Eye Damage / irritation – Category 1
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**Label Elements**



**Other Hazards**  
**Signal Word**  
**Hazard Statement(s)**  
  
**Precautionary Statement(s)**

**DANGER!**  
Harmful if swallowed.  
Causes serious eye damage  
Wear eye/face protection  
Do not eat, drink or smoke when using this product.  
Wash hands thoroughly after handling

**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.**  
**IF SWALLOWED:** Call a POISON CENTER or doctor/physician if you feel unwell.  
Rinse mouth.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
Nitric acid, ammonium calcium salt	15245- 12-2	100%	Calcium ammonium nitrate (CAN)	Calcium nitrate, ENVIROFLOC, Calcium ammonium nitrate double salt

**Notes** Pure substance

### SECTION 4. FIRST-AID MEASURES

**Inhalation** Remove exposed person to fresh air immediately. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention immediately.

**Skin Contact** Wash off with soap and plenty of water. Remove and wash contaminated clothing before re-use. Get medical attention if irritation develops and persists.

**Eye Contact** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If contact lens is present, DO NOT delay flushing or attempt to remove the lens until flushing is done. Get medical attention immediately.

**Ingestion** Rinse mouth thoroughly. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Get medical attention immediately. Harmful if swallowed. Ingestion may cause severe burns to the mucous membranes of the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations and bleeding.

**Most Important Symptoms and Effects, Acute and Delayed** Causes serious eye damage. Symptoms may include a burning sensation, pain, watering, and/or changes in vision (blurred vision). Permanent eye damage including blindness could result. Direct skin contact may cause slight or mild, transient irritation. Contact with dust can cause mechanical irritation or drying of the skin. Dusts may cause severe irritation or corrosive damage to the respiratory system. Symptoms include: Cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Symptoms may be delayed. Prolonged inhalation may cause susceptibility to respiratory illness from continued irritation.

**Immediate Medical Attention and Special Treatment** Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### SECTION 5. FIRE-FIGHTING MEASURES

**Extinguishing Media Suitable** Water spray, fog (flooding amounts).

**Extinguishing Media Unsuitable** Do not use a solid water stream as it may scatter and spread the fire.

**Extinguishing Media Specific Hazards Arising from the Product** Do not use carbon dioxide or other smothering agents, as they may be ineffective. Not considered flammable. Toxic fumes, gases or vapours may evolve on burning. May decompose to form toxic/corrosive gasses if exposed to high heat. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal

**Hazardous combustion products  
Special Protective Equipment and Precautions for Fire-Fighters**

Nitrogen oxides (NO<sub>x</sub>); Calcium oxides; Ammonia; and other irritating fumes and smoke.

**Protective equipment for fire-fighters:**

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Firefighters should wear an approved full-face, self-contained breathing apparatus (SCBA) and impervious clothing.

**Special fire-fighting procedures:**

Move containers from fire area if safe to do so. Contaminated surfaces may be slippery. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, and Emergency Procedures**

Restrict access to area until completion of clean-up. Keep people away from and upwind of spill/leak. Contaminated surfaces may be slippery. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus.

Refer to protective measures listed in sections 7 and 8.

**Environmental precautions  
Methods for Containment and Cleaning Up**

Do not allow material to contaminate ground water system. Prevent product from entering drains, sewers, waterways and soil.

Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if

safe to do so. Do not touch or walk through spilled material. Material can create slippery conditions. Avoid dust formation. Vacuum or sweep up spilled material using a

method that does not generate airborne dust. Place in clean, dry and labeled containers. Clean surface thoroughly to remove residual contamination. After cleaning, flush away traces with water. Do not flush into surface water or sanitary sewer system.

Refer to Section 13 for disposal of contaminated material. Contact the proper local authorities.

## SECTION 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

Avoid dust formation. Use in a well-ventilated area. Keep container tightly closed when not in use. Wear appropriate protective equipment. Avoid breathing dust. Material can create slippery conditions. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Do not ingest. Wash thoroughly after handling. Keep away from incompatibles. Keep away from extreme heat and flame. Empty containers retain residue and can be dangerous.

**Conditions for Safe Storage**

Store in a cool, dry, well ventilated area. Store away from incompatible materials. Keep away from heat and sources of ignition. Keep away from direct sunlight. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Do not store in open or unlabelled containers. Storage area should be clearly

identified, clear of obstruction and accessible only to trained and authorized personnel.

No smoking. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
Nitric acid, ammonium calcium salt	N/Av	N/Av	N/Av	N/Av

### Notes

**Appropriate Engineering Controls** Use only in well-ventilated areas. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation, wear suitable respiratory equipment.

### Individual Protection Measures

**Eye/Face Protection** Chemical goggles must be worn to prevent dusts from entering the eyes. A full face shield may also be necessary.

**Hand / Skin Protection** Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Depending on conditions of use, safety shoes and additional protective clothing may also be necessary.

**Respiratory Protection** If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Use a NIOSH approved dust respirator if dust levels exceed exposure limits. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

**Other protective equipment** Emergency showers and eyewash facilities should be nearby. Other equipment may be required depending on workplace standards.

**General hygiene considerations** Avoid breathing dust. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash hands thoroughly after using this product, and before eating, drinking or smoking. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical state

**Appearance** Solid - white, prills

**Odour** Odourless.

**Odour Threshold** Not applicable

**pH** 5-7 (110 g/l)

**Colour** White - tan

**Melting Point and Freezing Point** 752°F / 400°C Melting point

**Initial Boiling Point** Decomposes on heating.

<b>and Boiling Range</b>	
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	
<b>Flammability (solid, gas)</b>	Not considered flammable
<b>Upper and Lower Flammability or Explosive Limit</b>	Not applicable
<b>Vapour Pressure</b>	Not applicable
<b>Vapour Density (air = 1)</b>	Not applicable
<b>Specific gravity</b>	1.0 -1.1
<b>Relative Density (water = 1)</b>	Not applicable
<b>Solubility in Water</b>	Soluble (>100g/L)
<b>Solubility in Other Liquids</b>	Not applicable
<b>Partition Coefficient, n-Octanol / Water (Log Kow)</b>	Not applicable
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	Not available
<b>Kinematic Viscosity</b>	Not applicable
<b>Dynamic Viscosity</b>	Not applicable
<b>Explosive Properties</b>	Not explosive
<b>Oxidizing Properties</b>	None known

## SECTION 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Not normally reactive.
<b>Chemical Stability</b>	Stable under normal conditions. Decomposes on heating.
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur. No dangerous reaction known under conditions of normal use.
<b>Possibility of Hazardous Reactions</b>	None reported
<b>Conditions to Avoid</b>	Avoid dust formation. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation. Keep away from extreme heat and flame.
<b>Incompatible Materials</b>	Acids; Bases; Reducing agents.
<b>Hazardous Decomposition Products</b>	Nitrogen oxides (NOx); Calcium oxides; Ammonia.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation    Skin contact    Eye contact    Ingestion

**Acute Toxicity**

LC50 Not available  
 LD50 (oral) >300 - <2000 mg/kg  
 LD50 (dermal) >2000 mg/kg (rat) (No mortality)

**Notes** Prolonged inhalation may cause susceptibility to respiratory illness from continued irritation.

**Inhalation Irritation** Dusts may cause severe irritation or corrosive damage to the respiratory system  
 Symptoms include: Cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Ingestion Irritation** Ingestion may cause severe burns to the mucous membranes of the digestive tract.  
 Symptoms may include severe abdominal pain, vomiting, burns and bleeding.

**Skin Corrosion / Irritation** Direct skin contact may cause slight or mild, transient irritation. Contact with dust can cause mechanical irritation or drying of the skin.

**Serious Eye Damage / Irritation** Causes serious eye damage. Symptoms may include a burning sensation, pain, watering, and/or changes in vision (blurred vision). Permanent eye damage including blindness could result.

**STOT (Specific Target Organ Toxicity) - Single Exposure** Not classified as a specific target organ toxicity-single exposure.

**Aspiration Hazard**  
**STOT (Specific Target Organ Toxicity) - Repeated Exposure** Not classified as specific target organ toxicity-repeated exposure.

**Respiratory and/or Skin Sensitization** Not expected to be a skin or respiratory sensitizer

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	OSHA
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**Notes** No component of this product present at levels greater than, or equal to, 0.1% is identified as a carcinogen or potential carcinogen by ACGIH, IARC, OSHA, or NTP.

**Reproductive Toxicity**

**Development of Offspring** Not expected to be mutagenic in humans

**Sexual Function and Fertility** Not expected to cause reproductive effects.

**Effects on or via Lactation** None reported

**Germ Cell** None reported

**Mutagenicity** None reported

**Interactive Effects** None reported

**SECTION 12. ECOLOGICAL INFORMATION** *(section heading must appear; all content is optional)*

**Ecotoxicity** Not expected to be harmful to aquatic organisms. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. See the following tables for the substance's ecotoxicity data.

**Persistence and Degradability**  
**Bioaccumulative Potential**  
**Mobility in Soil**  
**Other Adverse Effects**

Biodegradation is not applicable to inorganic substances.  
 Not expected to bioaccumulate.  
 See the following data for ingredient information.  
 There is no data available for this product.  
 No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**SECTION 13. DISPOSAL CONSIDERATIONS** *(section heading must appear; all content is optional)*

**Disposal Handling** Handle in accordance with good industrial hygiene and safety practice. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Refer to protective measures listed in sections 7 and 8.

**Disposal Methods** Dispose in accordance with all applicable federal, state, provincial and local regulations.

**Ecotoxicity data:**

Ingredients	CAS Number	Toxicity to fish		
		LC50/96hr	NOEC / 21 day	M Factor
Nitric acid, ammonium calcium salt	15245-12-2	>100 mg/L Rainbow trout Read-across (Analogy)	157 mg/L (32 days) (Read-across)	None.

Ingredients	CAS Number	Toxicity to Daphnia		
		LC50/96hr	NOEC / 21 day	M Factor
Nitric acid, ammonium calcium salt	15245-12-2	>100 mg/L Daphnia magna (water flea)	Not available	None.

Ingredients	CAS Number	Toxicity to Algae		
		LC50/96hr	NOEC / 21 day	M Factor
Nitric acid, ammonium calcium salt	15245-12-2	>100 mg/L/72hr Green algae	100 mg/L/72hr	None.

**SECTION 14. TRANSPORT INFORMATION** *(section heading must appear; all content is optional)*

Regulation	UN No.	Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport Hazard Class(es)	Packing Group
TDG	None	Not regulated	Nitric acid, ammonium calcium salt	Not Regulated	None

**Special Precautions** Keep away from extreme heat and flame.  
 Appropriate advice on safety must accompany the package.

**Environmental Hazards** This substance does not meet the criteria for an environmentally hazardous

substance according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

**Transport in Bulk  
According to Annex II  
of MARPOL 73/78 and  
the IBC Code**

This information is not available.

## **SECTION 15. REGULATORY INFORMATION** *(section heading must appear; all content is optional)*

**Safety, Health and  
Environmental  
Regulations**

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).  
WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

## **SECTION 16. OTHER INFORMATION**

**Date of Latest  
Revision**

March 23, 2023

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