



SAFETY DATA SHEET CALCIUM AMMONIUM NITRATE REVISION 4, DATE 18 SEP 19

1. IDENTIFICATION

Product Name	Calcium Ammonium Nitrate
Other Names	No Data Available
Uses	Fertilisers.
Chemical Family	No Data Available
Chemical Formula	$5\text{Ca}(\text{NO}_3)_2 \cdot \text{NH}_4\text{NO}_3 \cdot 10\text{H}_2\text{O}$
Chemical Name	Nitric acid, ammonium calcium salt
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Not Scheduled



Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Acute Toxicity (Oral) - Category 4
Serious Eye Damage/Irritation - Category 1

Pictograms

Signal Word Danger

Hazard Statements **H302** Harmful if swallowed.
H318 Causes serious eye damage.

Precautionary Statements	Prevention	P264	Wash face, hands and any exposed skin 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 if you feel unwell.
		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.	
Disposal	P330	Rinse mouth.	
	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.	

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS*Ingredients*

Chemical Entity	Formula	CAS Number	Proportion
Nitric acid, ammonium calcium salt	Unspecified	15245-12-2	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Centre or doctor/physician for advice.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Advice to Doctor	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Non-combustible; however, will support combustion of other materials and increase intensity of a fire.
Extinguishing Media	If material is involved in a fire, use water flooding quantities of water for extinction - Do not use dry chemicals, Carbon dioxide (CO ₂) or foam.
Fire and Explosion Hazard	Decomposes on heating, emitting toxic fumes.
Hazardous Products of Combustion	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Nitrogen oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. Structural firefighter's uniform will provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	No action shall be taken involving any personal risk or without suitable training. Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Move containers from spill area. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labelled waste container. Dispose of via a licensed waste disposal contractor (see SECTION 13).
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	No information available.
Environmental Precautionary Measures	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat and sources of ignition - No smoking. Keep away from food/feedstuffs and incompatible materials (see SECTION 10).
Container	Keep in the original container or an approved alternative made from a compatible material. Do not store in unlabelled containers. Empty containers retain product residue and can be hazardous. Do not reuse container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: <ul style="list-style-type: none">- Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m³ (measured as inhalable dust).- New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m³; TWA = 3 mg/m³ (respirable dust).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	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.
Personal Protection Equipment	<ul style="list-style-type: none">- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/particulate filter respirator (refer to AS/NZS 1715 & 1716).- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Tightly-fitting goggles.- Hand protection: Handle with gloves. Recommended: Chemical-resistant, impervious gloves.- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls, safety shoes.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Granules, crystalline
Odour	Odourless
Colour	White
pH	5 - 7 (10% soln.)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	>400 °C

Freezing Point	No Data Available
Solubility	Very soluble in water (100 g/L)
Specific Gravity	2.05
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; however, will support combustion of other materials and increase intensity of a fire.
Reactions That Release Gases or Vapours	Decomposes on heating, emitting toxic fumes, including Nitrogen oxides, metal oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	The product is stable under normal conditions of storage and use.
Conditions to Avoid	Avoid generating dust. Avoid Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with acids, alkalis, reducing agents, organic/combustible materials.
Hazardous Decomposition Products	Decomposes on heating, emitting toxic fumes, including Nitrogen oxides, metal oxides.
Hazardous Polymerisation	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION**General Information**

- Acute toxicity: Harmful if swallowed. May cause nausea, vomiting, diarrhoea, and abdominal pain; large amounts may cause headaches, dizziness and a reduction in blood pressure (hypotension). Absorption of nitrates may cause methaemoglobinaemia.
- Skin corrosion/irritation: May cause skin irritation.
- Eye damage/irritation: Causes serious eye damage.
- Respiratory/skin sensitisation: No information available.
- Germ cell mutagenicity: No information available.
- Carcinogenicity: No information available.
- Reproductive toxicity: No information available.
- STOT (single exposure): Breathing in dust may result in respiratory tract 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.
- STOT (repeated exposure): No information available.
- Aspiration toxicity: No information available.

Acute**Ingestion**

- Acute toxicity (Oral):
- LD50, Rats: 300 - 2,000 mg/kg bw. [ECHA].

Carcinogen Category

None

12. ECOLOGICAL INFORMATION**Ecotoxicity**

No information available.

Persistence/Degradability

No information available.

Mobility

No information available.

Environmental Fate

Prevent entry into drains and waterways.

Bioaccumulation Potential

No information available.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of contents/container in accordance with local/regional/national regulations.

Special Precautions for Land Fill

No information available.

14. TRANSPORT INFORMATION**Land Transport (Australia)****ADG Code****Proper Shipping Name**

Calcium Ammonium Nitrate

Class

No Data Available

Subsidiary Risk(s)

No Data Available

No Data Available

UN Number

No Data Available

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Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	208
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	Calcium Ammonium Nitrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	208
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	Calcium Ammonium Nitrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	208
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)

US DOT

Proper Shipping Name	Calcium Ammonium Nitrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	208
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Calcium Ammonium Nitrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available

Pack Group	No Data Available
Special Provision	208
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Calcium Ammonium Nitrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	208
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR002571 - Fertilisers Subsidiary Hazard Group Standard 2020
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National/Regional Inventories

Australia (AIIIC)	Not Listed
Canada (DSL)	Not Listed
Canada (NDSL)	Listed
China (IECSC)	Not Listed
Europe (EINECS)	239-289-5
Europe (REACH)	01-2119493947-16-0016
Japan (ENCS/METI)	Not Listed

Korea (KECI)	KE-25913
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Listed
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes	CAAMNI0606, CAAMNI7203, CANITR0102, CANITR0103, CANITR0104, CANITR0301, CANITR0304, CANITR0310, CANITR0311, CANITR0600, CANITR0605, CANITR0607, CANITR0609, CANITR0701, CANITR0702, CANITR1023, CANITR1104, CANITR1105, CANITR1203, CANITR1204, CANITR1216, CANITR1700, CANITR1701, CANITR2001, CANITR2100, CANITR2101, CANITR2300, CANITR2400, CANITR2700, CANITR2800, CANITR3600, CANITR4400, CANITR4401, CANITR4501, CANITR4502, CANITR4503, CANITR4504, CANITR4505, CANITR4506, CANITR5000, CANITR5003, CANITR5004, CANITR5005, CANITR5006, CANITR5007, CANITR5008, CANITR5009, CANITR5010, CANITR5011, CANITR5012, CANITR5600, CANITR5602, CANITR5603, CANITR5605, CANITR5608, CANITR5700, CANITR5704, CANITR5705, CANITR6000, CANITR6001, CANITR6002, CANITR6003, CANITR6007, CANITR6008, CANITR6009, CANITR6010, CANITR6011, CANITR6012, CANITR6013, CANITR6014, CANITR6015, CANITR6100, CANITR6200, CANITR6400, CANITR6600, CANITR6601, CANITR6603, CANITR6606, CANITR6610, CANITR6611, CANITR6612, CANITR6613, CANITR6614, CANITR6615, CANITR7110, CANITR7111, CANITR7112, CANITR7113, CANITR7200, CANITR7207, CANITR7208, CANITR7300, CANITR7400, CANITR7401, CANITR7600, CANITR7800, CANITR7801, CANITR7802, CANITR7805, CANITR8200, CANITR8201, CANITR8202, CANITR8203, CANITR8204, CANITR8800, CANITR8808, CANITR8825, CANITR9100, CANITR9500
Revision	4
Revision Date	18 Sep 2019
Reason for Issue	Updated SDS
Key/Legend	<p>< Less Than</p> <p>> Greater Than</p> <p>AICS Australian Inventory of Chemical Substances</p> <p>atm Atmosphere</p> <p>CAS Chemical Abstracts Service (Registry Number)</p> <p>cm² Square Centimetres</p> <p>CO₂ Carbon Dioxide</p> <p>COD Chemical Oxygen Demand</p> <p>deg C (°C) Degrees Celcius</p> <p>EPA (New Zealand) Environmental Protection Authority of New Zealand</p> <p>deg F (°F) Degrees Farenheit</p> <p>g Grams</p> <p>g/cm³ Grams per Cubic Centimetre</p> <p>g/l Grams per Litre</p> <p>HSNO Hazardous Substance and New Organism</p> <p>IDLH Immediately Dangerous to Life and Health</p> <p>immiscible Liquids are insoluable in each other.</p> <p>inHg Inch of Mercury</p> <p>inH₂O Inch of Water</p> <p>K Kelvin</p> <p>kg Kilogram</p> <p>kg/m³ Kilograms per Cubic Metre</p> <p>lb Pound</p>

LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

ltr or **L** Litre

m³ Cubic Metre

mbar Millibar

mg Milligram

mg/24H Milligrams per 24 Hours

mg/kg Milligrams per Kilogram

mg/m³ Milligrams per Cubic Metre

Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH₂O Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight