Calcium Nitrate
SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Calcium Nitrate
Recommended uses:	Fertilizer end-use
Restrictions on uses:	None
Manufacturer:	Southern Agricultural Insecticides, Inc. P.O. Box 218 Palmetto, FL 34220
Company Telephone/Fax	(941)-722-3285 / (941)-723-2974
Emergency Telephone Number	(800) 424 9300 (CHEMTREC)

2. HAZARD(S) IDENTIFICATION

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification and labelling have been performed following the guidelines and recommendation of GHS and the intended use.

Classification of the substance or mixture:	ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS label elements

Hazard pictograms

Signal word	Danger
Hazard statements	Harmful if swallowed. Causes serious eye damage.
Precautionary statements	
Prevention	Wear protective gloves and eye protection. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Response	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.
Hazards not otherwise classified	Product forms slippery surface when combined with water.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Product / ingredient name	**CAS number**	%
Nitric acid, ammonium calcium salt	CAS: 15245-12-2	>=90 - <100

Any concentration shown as a range is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

Description of necessary first aid measures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
Skin contact	Wash with soap and water. Get medical attention if irritation develops.
Ingestion	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if you feel unwell.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact:	Causes serious eye damage.
Inhalation:	May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact:	No known significant effects or critical hazards.
Ingestion:	Harmful if swallowed. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact:	Adverse symptoms may include the following: pain watering redness
Inhalation:	No specific data.
Skin contact:	No specific data.
Ingestion:	Adverse symptoms may include the following: stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician:	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.
Specific treatments:	No specific treatment.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training. 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (section 11)

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media:	Use flooding quantities of water for extinction.
Unsuitable extinguishing media:	Do NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand.
Specific hazards arising from the chemical	No specific fire or explosion hazard.
Hazardous thermal decomposition products	Avoid breathing dusts, vapors or fumes from burning materials. In case of inhalation of decomposition products in a fire, symptoms may be delayed.
Special protective actions for fire-fighters	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.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Protective measures Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well ventilated area, away from incompatible materials (see section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep away from: organic materials, oil and grease.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits None.

Appropriate engineering controls If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures A washing facility or water for eye and skin cleaning purposes should be present.

Eye/face protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. (chemical splash goggles and/or face shield.) If inhalation hazards exist, a full-face respirator may be required instead. Recommended: Tightly-fitting goggles
Skin protection	
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. > 8 hours (breakthrough time): Protective gloves should be worn under normal conditions of use.
Body protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Solid [granules]
Color	White.
Odor	Odorless.
Odor threshold	Not determined.
pH	6.3 [Conc. 110 g/l]
Melting/freezing point	Decomposes 400 °C (752.00 °F)
Boiling/condensation point	Not determined.
Sublimation temperature	Not determined.
Flash point	Not determined.
Evaporation rate	Not determined.
Flammability	Non-flammable.
Lower and upper explosive (flammable) limits	
	Lower: Not determined. **Upper:** Not determined.
Vapor pressure	Not determined.
Relative density	Not determined.
Solubility	Soluble in the following materials: cold water
Partition coefficient: noctanol/water	Not determined.
Auto-ignition temperature	Not determined.
Decomposition temperature	400 °C (752.00 °F)
Viscosity	**Dynamic:** Not determined. **Kinematic:** Not determined.
Explosive properties	None.
Oxidizing properties	None.

10. STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Avoid contamination by any source including metals, dust and organic materials.

Incompatible materials alkalis, combustible materials, reducing materials, organic materials, acids

Hazardous decomposition products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Product / Ingredient name	Result	Species	Dose	Exposure	References
Nitric acid, ammonium calcium salt	LD50 Oral	Rat 500	mg/kg 423 Acute Oral toxicity - Acute Toxic Class Method	-	IUCLID 5
	LD50 Dermal	Rat	> 2,000 mg/kg OECD 402	-	IUCLID 5

Conclusion/Summary Harmful if swallowed.

Irritation/Corrosion

Product / Ingredient name	Result	Species	Exposure	Observation	References
Nitric acid, ammonium calcium salt	Eyes - Severe irritant OECD 405	Rabbit	24 - 72 h	21 d	IUCLID 5

Conclusion/Summary

Skin No known significant effects or critical hazards.

Eyes Causes serious eye damage.

Respiratory No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin No known significant effects or critical hazards.

Respiratory No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary No known significant effects or critical hazards.

Reproductive toxicity

Product / Ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure	References
Nitric acid, ammonium calcium salt	Negative	Negative	Negative	Rat	Oral: 1500 mg/kg OECD 422	53 days	IUCLID 5

Conclusion/Summary No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

No known significant effects or critical hazards.

Specific target organ toxicity (repeated exposure)
No known significant effects or critical hazards.

Aspiration hazard
No known significant effects or critical hazards.

Information on the likely routes of exposure	Not available.

Potential acute health effects

Eye contact	Causes serious eye damage.
Inhalation	May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	No known significant effects or critical hazards.
Ingestion	Harmful if swallowed. May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	Adverse symptoms may include the following: pain, watering, redness
Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	Adverse symptoms may include the following: stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Long term exposure

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Potential chronic health effects

Product / ingredient name	Result	Species	Dose	Exposure	References
Nitric acid, ammonium calcium salt	NOAEL Oral	Rat	> 1000 mg/kg OECD 407	28 days	IUCLID 5

Conclusion/Summary	No known significant effects or critical hazards.
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include the following: pain, watering, redness
Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	Adverse symptoms may include the following: stomach pains

Numerical measures of toxicity

Acute toxicity estimates	Not available.

12. ECOLOGICAL INFORMATION

Toxicity

Product / ingredient name	Result	Species	Exposure	References
Nitric acid, ammonium calcium salt	Acute LC50 447 mg/l Fresh water	Fish - Labeo boga	48 h	IUCLID 5
	Acute EC50 > 100 mg/l Fresh water OECD 202	Aquatic invertebrates. - Daphnia	48 h	IUCLID 5
	Acute LC50 > 100 mg/l Fresh water OECD 201	Aquatic plants - Heterosigma akashiwo	72 h	IUCLID 5
	Acute EC50 > 1,000 mg/l Activated sludge OECD 209	Microorganism	3 h	IUCLID 5

Conclusion/Summary No known significant effects or critical hazards.

Persistence/degradability

Conclusion/Summary Readily biodegradable in plants and soils.

Nitric acid, ammonium calcium salt Not relevant for inorganic substances.

Bioaccumulative potential

Product / ingredient name	LogPow	BCF	Potential
Nitric acid, ammonium calcium salt	< 0	-	low

Conclusion/Summary No known significant effects or critical hazards.

Mobility in soil Not available.

Soil/water partition coefficient (KOC)

Mobility This product may move with surface or groundwater flows because its water solubility is high.

Other adverse effects No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Product

Methods of disposal The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Acute hazardous waste "P" List:
Not listed

United States - RCRA Toxic hazardous waste "U" List:
Not listed

14. TRANSPORT INFORMATION

Regulation: UN Class
Not regulated.
Environmental hazards No.

Regulation: IMDG
Not regulated.

Regulation: IATA
Not regulated.

Regulation: DOT Classification
Not regulated.
Environmental hazards: No.

Regulation: TDG Class
Not regulated.
Environmental hazards: No.

Special precautions for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Remark	NOT A DOT REGULATED PRODUCT. 49 CFR 172.102. Special provision 34 specifically removes the calcium nitrate double salt (calcium nitrate and ammonium nitrate) from the hazardous materials table 49 CFR 172.101.
IMSBC	
Bulk cargo shipping name	CALCIUM NITRATE FERTILIZER
Class	Not applicable.
Group	C
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. REGULATORY INFORMATION

United States	
U.S. Federal regulations	
TSCA	None of the components are listed.
EPA Clean water act (CWA)	Not listed
United States - EPA Clean air act (CAA)	Not listed
Accidental release prevention - Toxic substances	
SARA 302/304	Not applicable.
SARA 304 RQ	Not applicable.
SARA 311/312 Classification	Immediate (acute) health hazard
State regulations	
Massachusetts	None of the components are listed.
New York	None of the components are listed.
New Jersey	None of the components are listed.
Pennsylvania	None of the components are listed.

California Prop. 65
This product contains a chemical (or chemicals) known to the State of California to cause cancer and birth defects or other reproductive harm.

16. OTHER INFORMATION
Preparation date 2/10/16

Other Information

While this company believes that the data contained herein are factual and the opinions expressed are based on tests and

data believed to be reliable, it is the user's responsibility to determine the safety, toxicity, and suitability for his or her own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by this company as to the effects of such use, the results to be obtained, or the safety and toxicity of the product, nor does this company assume any liability arising out of use, by others, of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or governmental regulations.