



Material Safety Data Sheet Ceric Ammonium Nitrate, ACS

Section 1 - Chemical Product and Company Identification

MSDS Name:

Ceric Ammonium Nitrate, ACS

Catalog Numbers:

LC12918

Synonyms:

Ammonium cerium (IV) nitrate, CAN.

Company Identification:

LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
16774-21-3	Ceric ammonium nitrate	100

Section 3 - Hazards Identification

Emergency Overview

Appearance: *Orange crystalline powder*

Danger! Causes eye irritation and possible injury. Strong oxidizer. Contact with other material may cause a fire. Causes eye, skin, and respiratory tract irritation. Harmful if swallowed.

Target Organs: *Blood, respiratory system, eyes, skin.*

Potential Health Effects

Eye:

Causes eye irritation. Risk of serious damage to eyes.

Skin:

Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion:

Harmful if swallowed. May cause irritation of the digestive tract. Ingestion of nitrate containing compounds can lead to methemoglobinemia.

Inhalation:

Causes respiratory tract irritation. May be harmful if inhaled. Inhalation of high concentrations of ammonia vapors may cause shortness of breath, bronchospasm, chest pain and pulmonary edema, which may be fatal.



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Chronic:

May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death.

Section 4 - First Aid Measures

Eyes:

Flush eyes at once with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Do not induce vomiting unless directed to do so by medical personnel. If conscious and alert, rinse mouth and give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Exposure to heat may promote violent decomposition. Strong oxidizer. Contact with other material may cause fire. Dangerous fire hazard in the form of dust when exposed to heat or flame.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature:

Not available.

Flash Point:

Not available.

NFPA Rating:

Not available.

Explosion Limits:

Lower: n/a Upper: n/a

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.



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Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling:

Use with adequate ventilation. Minimize dust generation and accumulation. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Storage:

Do not store near combustible materials. Store in a tightly closed container. Keep away from reducing agents. Do not store in metal containers. Store in a cool, dry, well-ventilated location. Separate from combustible materials, halogens, sulfides, metals. See also NFPA 430, Code for the Storage of Liquid and Solid Oxidizers. Keep away from alkalies, oxidizable materials, finely divided metals, alcohols, and permanganates.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Ceric ammonium nitrate	none listed	none listed	none listed

OSHA Vacated PELs:

No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

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:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Crystalline powder
Color:	Orange
Odor:	Characteristic nitric-like odor
pH:	<1



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Vapor Pressure:	Not available
Vapor Density:	Not available
Evaporation Rate:	Not available
Viscosity:	Not available
Boiling Point:	Not available
Freezing/Melting Point:	107-108 C
Decomposition Temperature:	Not available
Solubility in water:	1410 g/L at 20 C
Specific Gravity/Density:	2.2
Molecular Formula:	Ce(NO ₃) ₄ ·2NH ₄ NO ₃
Molecular Weight:	548.22

Section 10 - Stability and Reactivity

Chemical Stability:

Decomposes when heated. Stable, however, may violently decompose at temperatures above 175°C.

Conditions to Avoid:

Dust generation, excess heat, exposure to moist air or water, temperatures above 85°C.

Incompatibilities with Other Materials:

Reducing agents, acids, bases, finely powdered metals, phosphorus, hypophosphites, tin chloride, organic materials, thiocyanates, isothiocyanates, combustible materials, cyanides. Reactions with heavy metals may form explosive substances.

Hazardous Decomposition Products:

Nitrogen oxides, ammonia, metallic oxides.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 16774-21-3 unlisted.

LD50/LC50:

CAS# 16774-21-3:

Oral, Rat: LD50: >200-2000mg/kg,

Oral, Rat: LD50: 1600-3200mg/kg,

Irritation, eye, rabbit: Severe irritation

Carcinogenicity:

CAS# 16774-21-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

No information found

Reproductive:

No information found

Mutagenicity:

No information found

Neurotoxicity:

No information found



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Section 12 - Ecological Information

Ecotoxicity:

Daphnia: Water Flea: >100mg/L; 48Hrs.; No data available.

Environmental:

Will not bio-accumulate.

Physical:

No information available.

Other:

Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Nitrates, inorganic, nos.

Hazard Class: 5.1

UN Number: UN1477

Packing Group: PGII

Section 15 - Regulatory Information

US Federal

TSCA:

CAS# 16774-21-3 is listed on the TSCA inventory.

SARA Reportable Quantities (RQ):

None of the chemicals in this material have an RQ.

CERCLA/SARA Section 313:

This material contains Ammonium cerium (IV) nitrate (listed as Water Dissociable Nitrate Compounds), 98-100%, (CAS# 16774-21-3) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous:

None of the chemicals in this product are considered highly hazardous by OSHA.

US State

State Right to Know:

CAS# 16774-21-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Regulations:

None.



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European/International Regulations

Canadian DSL/NDSL:

CAS# 16774-21-3 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS#16774-21-3 is not listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: October 24, 2007

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