

**Section 1 Chemical Product and Company Identification**

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**HOME SCIENCE TOOLS**

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**CHEMTREC 24 Hour Emergency USA**  
**Phone Number (800) 424-9300**  
**1 703-741-5500 (from anywhere in the world).**  
For laboratory and industrial use only.  
Not for drug, food or household use.

<b>Product</b>	<b>AMMONIUM NITRATE</b>
<b>Synonyms</b>	Nitric Acid Ammonium Salt

**Section 2 Hazards Identification**

**Signal word:** WARNING  
**Pictograms:** GHS03 / GHS07  
**Target organs:** Liver, Kidneys, Blood



**GHS Classification:**  
Oxidizing solid (Category 3)  
Acute toxicity, oral (Category 5)  
Skin irritation (Category 2)  
Eye irritation (Category 2A)

**GHS Label information: Hazard statement(s):**  
H272: May intensify fire; oxidizer.  
H303: May be harmful if swallowed.  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.

**Precautionary statement(s):**

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P220: Keep away from clothing/incompatible/combustible materials.  
P221: Take any precaution to avoid mixing with combustibles/acids/oxidizers.  
P264: Wash hands thoroughly after handling.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P312: Call a POISON CENTER or doctor if you feel unwell.  
P302+P352: IF ON SKIN: Wash with plenty of water and soap.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332+P313: If skin irritation occurs: Get medical attention.  
P337+P313: If eye irritation persists: Get medical attention.  
P362+P364: Take off contaminated clothing and wash it before reuse.  
P370+P378: In case of fire: Use water to extinguish.  
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known  
Physical hazards not otherwise classified (PHNOC) - Not Known

**Section 3 Composition / Information on Ingredients**

Chemical Name	CAS #	%	EINECS
Ammonium nitrate	6484-52-2	100%	229-347-8

**Section 4 First Aid Measures**

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

**Section 5 Fire Fighting Measures**

**Suitable Extinguishing Media:** Use water. Do not use dry chemicals or foams. CO<sub>2</sub> or Halon® may provide limited control. **Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool. **Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Strong oxidizer. If heated under confinement, material may explode. Ammonium nitrate of any grade, including fertilizer, when contaminated with oil, charcoal or other organic materials should be considered an explosive capable of detonation by combustion or by explosion of adjacent explosive materials. Combustion by-products include oxides of nitrogen and ammonia. Closed containers may rupture violently when heated.

**Section 6 Accidental Release Measures**

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Particulates not otherwise classified/regulated	None established.	TWA: 5 mg/m <sup>3</sup> Respirable fraction	None established.

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Hygroscopic solid. White granules <b>Odor:</b> No odor. <b>Odor threshold:</b> Data not available. <b>pH:</b> 5.4 <b>Melting / Freezing point:</b> 169°C (338°F) <b>Boiling point:</b> Decomposes <b>Flash point:</b> Data not available	<b>Evaporation rate ( = 1):</b> Data not available <b>Flammability (solid/gas):</b> Data not available. <b>Explosion limits: Lower / Upper:</b> Data not available <b>Vapor pressure (mm Hg):</b> Data not available <b>Vapor density (Air = 1):</b> Data not available <b>Relative density (Specific gravity):</b> 1.73 @ 23°C <b>Solubility(ies):</b> 118 g/100 g water @ 30°C	<b>Partition coefficient:</b> Data not available <b>Auto-ignition temperature:</b> Data not available <b>Decomposition temperature:</b> 210°C (410°F) <b>Viscosity:</b> Data not available. <b>Molecular formula:</b> NH <sub>4</sub> NO <sub>3</sub> <b>Molecular weight:</b> 80.05
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## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable  
**Hazardous polymerization:** Will not occur.  
**Conditions to avoid:** Excessive temperatures and other sources of ignition. Combustible and organic materials.  
**Incompatible materials:** Peroxides, strong oxidizers, reducing agents, organic materials.  
**Hazardous decomposition products:** Nitrogen oxides.

## Section 11 Toxicological Information

**Acute toxicity:** Oral-rat LD50: 2217 mg/kg ; Inhalation-rat LC50: >88.8 mg/L/4 hours [Ammonium nitrate]  
**Skin corrosion/irritation:** Data not available  
**Serious eye damage/irritation:** Data not available  
**Respiratory or skin sensitization:** Data not available  
**Germ cell mutagenicity:** Data not available  
**Carcinogenicity:** Data not available  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.  
**Reproductive toxicity:** Data not available  
**STOT-single exposure:** Data not available  
**STOT-repeated exposure:** Data not available  
**Aspiration hazard:** Data not available  
**Potential health effects:**  
Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.  
Ingestion: May cause gastroenteritis and abdominal pains. Purging and diuresis can be expected. Rare cases of nitrates being converted to the more toxic nitrites have been reported, mostly with infants.  
Skin: Causes irritation to skin. Symptoms include redness, itching, and pain.  
Eyes: Causes irritation, redness, and pain.  
**Signs and symptoms of exposure:** Small repeated oral doses of nitrates may cause weakness, depression, headache, and mental impairment. Persons with stomach diseases and infants are much more sensitive to nitrate ion toxicity.  
**Additional information: RTECS #: BR9050000 [Ammonium nitrate]**

## Section 12 Ecological Information

**Toxicity to fish:** Cyprinus carpio (Fish, fresh water) LC50: 74 mg/L/48 hours  
**Toxicity to daphnia and other aquatic invertebrates:** Daphnia magna (Crustacea) EC50: 555 mg/L  
**Toxicity to algae:** Scenedesmus quadricauda (Algae) EC50: 83 mg/L  
**Persistence and degradability:** No data available  
**Bioaccumulative potential:** No data available  
**Mobility in soil:** No data available  
**PBT and vPvB assessment:** No data available  
**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport Information (US DOT / CANADA TDG)

**UN/NA number:** UN1942  
**Shipping name:** Ammonium nitrate  
**Hazard class:** 5.1  
**Packing group:** III  
**Reportable Quantity:** No  
**Marine pollutant:** No  
**Exceptions:** Limited quantity equal to or less than 5 Kg  
**2016 ERG Guide #** 140

## Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Ammonium nitrate	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

## Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.