

MSDS# 01200

Section 1 - Chemical Product and Company Identification

MSDS Name: Ammonium citrate dibasic

Catalog Numbers: 61116-0025, 61116-5000, A663-212, A663-500, NC9525748

Synonyms: Ammonium monohydrogen citrate; Citric acid diammonium salt; Diammonium citrate; Diammonium hydrogen citrate; Dibasic ammonium citrate.

Company Identification: Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100  
Emergency Number US: 201-796-7100  
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

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Risk Phrases:

CAS#: 3012-65-5  
Chemical Name: Ammonium citrate dibasic  
%: 100  
EINECS#: 221-146-3  
Hazard Symbols:

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Text for R-phrases: see Section 16

Hazard Symbols: XI



Risk Phrases: 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Causes eye, skin, and respiratory tract irritation. Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.  
Skin: Causes skin irritation.  
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.  
Inhalation: Causes respiratory tract irritation.  
Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**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.

**Notes to Physician:** Absorption of this product into the body may cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Moderate degrees of cyanosis need to be treated only by supportive measures: bed rest and oxygen inhalation. For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood. Cleansing of the entire contaminated area of the body is of utmost importance.

**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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Runoff from fire control or dilution water may cause pollution.

**Extinguishing Media:** Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.

**Autoignition Temperature:** Not applicable.

**Flash Point:** Not applicable.

**Explosion Limits:** Not available

**Lower:** Not available

**Explosion Limits:** Not available

**Upper:** Not available

**NFPA Rating:** health: 2; flammability: 0; instability: 0;

**Section 6 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

**Section 7 - Handling and Storage**

**Handling:** Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**Section 8 - Exposure Controls, Personal Protection**

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ammonium citrate dibasic	none listed	none listed	none listed
Ammonia	25 ppm; 35 ppm STEL	25 ppm TWA; 18 mg/m3 TWA 300 ppm IDLH	50 ppm TWA; 35 mg/m3 TWA

OSHA Vacated PELs: Ammonium citrate dibasic: None listed Ammonia: None listed

**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**

**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: Solid

Color: white

Odor: ammonia-like - weak odor

pH: 4.8-5.3 (5% soln)

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: Decomposes.

Decomposition Temperature: Not available

Solubility in water: Soluble in water.

Specific Gravity/Density: 1.5

Molecular Formula:  $(\text{NH}_4)_2\text{C}_6\text{H}_6\text{O}_7$

Molecular Weight: 226.11

### Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials, dust generation, excess heat, strong oxidants.
Incompatibilities with Other Materials	Not available
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, nitrogen oxides (NO <sub>x</sub> ) and ammonia (NH <sub>3</sub> ).
Hazardous Polymerization	Has not been reported.

### Section 11 - Toxicological Information

RTECS#:	CAS# 3012-65-5: None listed CAS# 7664-41-7: BO0875000 RTECS: Not available. RTECS: <b>CAS# 7664-41-7:</b> Inhalation, mouse: LC50 = 4230 ppm/1H; Inhalation, mouse: LC50 = 4600 mg/m <sup>3</sup> /2H; Inhalation, rabbit: LC50 = 7 gm/m <sup>3</sup> /1H; Inhalation, rat: LC50 = 2000 ppm/4H;
LD50/LC50:	Inhalation, rat: LC50 = 18600 mg/m <sup>3</sup> /5M; Inhalation, rat: LC50 = 7040 mg/m <sup>3</sup> /30M; Skin, rat: LD50 = 112000 mg/m <sup>3</sup> /15M; Skin, rat: LD50 = 71900 mg/m <sup>3</sup> /30M; Skin, rat: LD50 = 4840 mg/m <sup>3</sup> /60M;
Carcinogenicity:	Ammonium citrate dibasic - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. Ammonia - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

### Section 12 - Ecological Information

Not available

### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

### Section 14 - Transport Information

US DOT

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:  
UN Number:  
Packing Group:

USA RQ: CAS# 3012-65-5: 5000 lb final RQ; 2270 kg final RQ

USA RQ: CAS# 7664-41-7: 100 lb final RQ; 45.4 kg final RQ

#### Section 15 - Regulatory Information

##### European/International Regulations

###### European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

###### WGK (Water Danger/Protection)

CAS# 3012-65-5: 1

CAS# 7664-41-7: 2

###### Canada

CAS# 3012-65-5 is listed on Canada's DSL List

CAS# 7664-41-7 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not controlled.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 3012-65-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 7664-41-7 is listed on Canada's Ingredient Disclosure List

##### US Federal

###### TSCA

CAS# 3012-65-5 is listed on the TSCA Inventory.

CAS# 7664-41-7 is listed on the TSCA Inventory.

#### Section 16 - Other Information

MSDS Creation Date: 12/12/1997

Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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