



## Safety Data Sheet

### Ammonium citrate dibasic solution

#### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Ammonium citrate dibasic solution

**Synonyms:** DI water solutions of \_ ; Citric acid ammonium salt, Diammonium hydrogen citrate, Dibasic ammonium citrate, Ammonium monohydrogen citrate, Ammonium citrate dibasic, DIAMMONIUM CITRATE, Ammonium monohydrogencitrate, Citric acid, diammonium salt, Diammonium hydrogen 2-hydroxypropane- 1,2,3-tricarboxylate

**Company Identification:**

Cymer, LLC  
124 Cymer Lane  
Decatur, TN 37322

**For information, call:** 423-334-2778

**For CHEMTEL assistance, call:** 1-888.255.3924

**For International CHEMTEL assistance, call:** +1.813.248.0573

#### Section 2 - Hazards Identification

##### Emergency Overview

##### OSHA Hazards

Irritant

##### GHS Classification

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 3)

##### GHS Label elements, including precautionary statements

Pictogram	A GHS hazard pictogram consisting of a black exclamation mark centered within a red diamond-shaped border.
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Signal word	Warning
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**Hazard statement(s)**

H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

**Precautionary statement(s)**

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**HMIS Classification**

**Health hazard:** 2  
**Flammability:** 0  
**Physical hazards:** 0

**NFPA Rating**

**Health hazard:** 2  
**Fire:** 0  
**Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.

**Skin** Harmful if absorbed through skin. Causes skin irritation.

**Eyes** Causes eye irritation.

**Ingestion** May be harmful if swallowed.

## Section 3 - Composition, Information on Ingredients

**Ammonium citrate dibasic**

Synonyms: Citric acid ammonium salt, Diammonium hydrogen citrate

Formula : C6H14N2O7

Molecular Weight : 226.18 g/mol

CAS#	Chemical Name	Percent	EINECS/ELINCS
3012-65-5	Ammonium citrate dibasic	30.0-60.0	221-146-3
7732-18-5	Water	70.0-40.0	231-791-2

## Section 4 - First Aid Measures

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## Section 5 - Fire Fighting Measures

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

## Section 6 - Accidental Release Measures

**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

**Environmental precautions**

Do not let product enter drains.

**Methods for cleaning up**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## Section 7 - Handling and Storage

**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Hygroscopic

## Section 8 - Exposure Controls, Personal Protection

**Exposure Limits**

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ammonium citrate dibasic	none listed	none listed	none listed

**OSHA Vacated PELs:** Ammonium benzoate: No OSHA Vacated PELs are listed for this chemical.

**Personal protective equipment**

**Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Colorless

**Odor: Threshold:** no data available

**pH:** 5.2 at 50 g/l at 20 °C (68 °F)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Ignition temperature:** no data available

**Auto ignition temperature:** no data available

**Lower explosion limit:** no data available

**Upper explosion limit:** no data available

**Flash point:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** Melting point/range: 192 - 198 °C (378 - 388 °F)

**Decomposition Temperature:** Not available.

**Solubility:** no data available

**Specific Gravity/Density:**

**Molecular Formula:** C6H14N2O7

**Molecular Weight:** : 226.18 g/mol

## Section 10 - Stability and Reactivity

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

no data available

**Conditions to avoid**

no data available.

**Materials to avoid**

Strong oxidizing agents

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

Other decomposition products - no data available

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

### **Acute toxicity**

#### **Oral LD50**

LD50

no data available

#### **Inhalation LC50**

no data available

#### **Dermal LD50**

no data available

#### **Other information on acute toxicity**

no data available

### **Skin corrosion/irritation**

no data available

### **Serious eye damage/eye irritation**

no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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.

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**

no data available

### **Teratogenicity**

no data available

### **Specific target organ toxicity - single exposure (Globally Harmonized System)**

Inhalation - May cause respiratory irritation.

### **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

### **Aspiration hazard**

no data available

**Potential health effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.

**Ingestion** May be harmful if swallowed.

**Skin** Harmful if absorbed through skin. Causes skin irritation.

**Eyes** Causes eye irritation.

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

no data available

**Additional Information**

RTECS: Not available

## Section 12 - Ecological Information

**Toxicity**

no data available

**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**

no data available

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

**Contaminated packaging**

Dispose of as unused product.

## Section 14 - Transport Information

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

## Section 15 - Regulatory Information

**OSHA Hazards**

Harmful by ingestion, Irritant.

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

Diammonium hydrogen 2-hydroxypropane-1,2,3-tricarboxylate CAS-No. 3012-65-5

Revision Date 1993-04-24

**Pennsylvania Right To Know Components**

Diammonium hydrogen 2-hydroxypropane-1,2,3-tricarboxylate CAS-No. 3012-65-5

Revision Date 1993-04-24

**New Jersey Right To Know Components**

Diammonium hydrogen 2-hydroxypropane-1,2,3-tricarboxylate CAS-No. 3012-65-5

Revision Date 1993-04-24

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 16 - Additional Information

**MSDS Creation Date:** 1/15/2013

*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 Cymer, LLC 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 Cymer has been advised of the possibility of such damages.*