

## Citric Acid Monohydrate

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Citric Acid Monohydrate
<b>Other Means of Identification</b>	beta-Hydroxytricarballic acid, 2-Hydroxypropanetricarboxylic acid
<b>Product Code(s)</b>	CI4015, CI4020
<b>Product Family</b>	Organic solid
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	1396

### SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

#### Classification

Combustible dust - Category 1; Eye irritation - Category 2; Specific target organ toxicity (single exposure) - Category 3

#### Label Elements



Signal Word:  
Warning

#### Hazard Statement(s):

May form combustible dust concentrations in air.  
Causes serious eye irritation.  
May cause respiratory irritation.

#### Precautionary Statement(s):

##### Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Wash hands and skin thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.

##### Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.

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Storage:  
Store in a well-ventilated place. Keep container tightly closed.

Disposal:  
Dispose of contents and container in accordance with local, regional, national and international regulations.

**Other Hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Citric acid, monohydrate	5949-29-1	> 99	beta-Hydroxytricarballic acid, 2-Hydroxypropanetricarboxylic acid	

**SECTION 4. FIRST-AID MEASURES**

**First-aid Measures**

**Inhalation**

Remove source of exposure or move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

**Skin Contact**

Immediately rinse skin with lukewarm, gently flowing water for at least 30 minutes. Immediately call a Poison Centre or doctor.

**Eye Contact**

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor. Specific treatment is required.

**Ingestion**

Rinse mouth with water. Do not induce vomiting. Immediately call a Poison Centre or doctor.

**First-aid Comments**

Provide general supportive measures (comfort, warmth, rest).

Consult a doctor and/or the nearest Poison Control Centre for all exposures except under minor instances of inhalation or skin contact.

All first aid procedures should be periodically reviewed by a doctor familiar with the material and its conditions of use in the workplace.

**Most Important Symptoms and Effects, Acute and Delayed**

If in eyes: causes moderate to severe irritation.

**Immediate Medical Attention and Special Treatment**

**Special Instructions**

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**SECTION 5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

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### Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

### Unsuitable Extinguishing Media

None known.

### Specific Hazards Arising from the Product

Combustible dust. Powder may form explosive dust-air mixture. Closed containers may rupture violently when heated releasing contents. Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide.

### Special Protective Equipment and Precautions for Fire-fighters

Dust explosion hazard. Use water spray or fog to prevent dust formation and minimize risk of explosion. Evacuate area. Fight fire from a safe distance or a protected location. Move containers from fire area if it can be done without risk. Otherwise, use water in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat. Use water spray to flush spills away from ignition sources. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal. Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Notify government occupational health and safety and environmental authorities.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

### Methods and Materials for Containment and Cleaning Up

Small spills of solutions: contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Flush spill area.

Small spills of solids: collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Flush spill area.

Large spills or leaks: contact emergency services and manufacturer/supplier for advice.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating dusts. Keep smallest practical amount in work area. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Prevent accidental contact with incompatible chemicals. Keep containers tightly closed when not in use or empty. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area.

### Conditions for Safe Storage

Store in an area that is: cool, dry, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Keep amount in storage to a minimum. Comply with all applicable health and safety regulations, fire and building codes.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
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## Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use a corrosion-resistant exhaust ventilation system separate from other ventilation systems. Exhaust directly to the outside, taking any necessary precautions for environmental protection. Provide eyewash and safety shower if contact or splash hazard exists.

## Individual Protection Measures

### Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

### Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

### Respiratory Protection

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

### Basic Physical and Chemical Properties

<b>Appearance</b>	White crystalline powder.
<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not available
<b>pH</b>	2.2 (1% solution)
<b>Melting Point/Freezing Point</b>	100 - 152 °C (212 - 306 °F) (melting); 100 - 152 °C (212 - 306 °F) (freezing)
<b>Initial Boiling Point/Range</b>	Not available
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available
<b>Upper/Lower Flammability or Explosive Limit</b>	Not applicable (upper); Not applicable (lower)
<b>Vapour Pressure</b>	~ 0 kPa (0 mm Hg)
<b>Vapour Density (air = 1)</b>	Not applicable
<b>Relative Density (water = 1)</b>	1.54 at 25 °C
<b>Solubility</b>	Very soluble in water; Highly soluble in alcohols (e.g. ethanol).
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	-1.72 at 20 °C
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	> 170 °C (338 °F)
<b>Viscosity</b>	Not applicable (kinematic); Not applicable (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Solid
<b>Molecular Weight</b>	210.14
<b>Other Physical Property 1</b>	Note: Above Partition Coefficient is for anhydrous form of Citric Acid.

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Potential dust explosion hazard.

### Chemical Stability

Normally stable.

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**Possibility of Hazardous Reactions**

None known.

**Conditions to Avoid**

Generation of dust. Open flames, sparks, static discharge, heat and other ignition sources.

**Incompatible Materials**

Strong oxidizing agents (e.g. perchloric acid), strong reducing agents (e.g. hydrides), strong bases (e.g. sodium hydroxide), metals (e.g. aluminum).

**Hazardous Decomposition Products**

Irritating chemicals; acrid smoke; very toxic carbon monoxide, carbon dioxide.

**SECTION 11. TOXICOLOGICAL INFORMATION****Likely Routes of Exposure**

Inhalation; skin contact; eye contact; ingestion.

**Acute Toxicity**

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Citric acid, monohydrate	Not available	3000 mg/kg (rat)	Not available

**Skin Corrosion/Irritation**

May cause skin irritation.

**Serious Eye Damage/Irritation**

Causes serious eye irritation based on skin irritation information.

**STOT (Specific Target Organ Toxicity) - Single Exposure****Inhalation**

May cause nose and throat irritation.

**Ingestion**

No information was located.

**Aspiration Hazard**

No information was located.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

No information was located.

**Respiratory and/or Skin Sensitization**

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Citric acid, monohydrate	Not evaluated	Not Listed	Not Listed	Not Listed

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## Reproductive Toxicity

### Development of Offspring

Not known to harm the unborn child.

### Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

### Effects on or via Lactation

No information was located.

## Germ Cell Mutagenicity

Not known to be a mutagen.

## Interactive Effects

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Bury in a licensed landfill or burn in an approved incinerator according to federal, provincial/state, and local regulations.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

**Special Precautions** Not applicable

### Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

##### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

#### USA

##### Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

**SDS Prepared By** Alphachem Limited

**Phone No.** (905)-821-2995

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**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**Disclaimer** This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.

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