Printing date 12/01/2014

Reviewed on 04/01/2014

1 Identification

- · Product identifier
- · Trade name: Citric Acid Monohydrate, Laboratory Grade Crystal
- · Article number: C5506
- CAS Number: 5949-29-1
- EC number:
- 201-069-1
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Aqua Solutions, Inc.
 6913 Highway 225 DEER PARK, TX 77536 USA
 800-256-2586
- Information department: Product safety department Technical Coordinator Sherman Nelson sherman@aquasolutions.org
- Emergency telephone number: Chemtrec: 800-424-9300 Canutec: 613-996-6666

2 Hazard(s) identification

· Classification of the substance or mixture



Eye Irrit. 2A H319 Causes serious eye irritation.

· Label elements

• *GHS label elements* The substance is classified and labeled according to the Globally Harmonized System (GHS). • *Hazard pictograms*



- · Signal word Warning
- · Hazard statements
- Causes serious eye irritation.
- Precautionary statements
 Wear eye protection / face protection.
 Wash thoroughly after handling.
 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.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

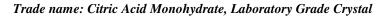
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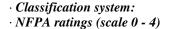


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HEALTH1Health = 1FIRE1Fire = 1REACTIVITY0Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 5949-29-1 Citric Acid Monohydrate
- Identification number(s)
- **EC number:** 201-069-1

4 First-aid measures

- · Description of first aid measures
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: If symptoms persist consult doctor.
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- *Indication of any immediate medical attention and special treatment needed No further relevant information available.*

5 *Fire-fighting measures*

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water. • Methods and material for containment and cleaning up: Pick up mechanically.

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Trade name: Citric Acid Monohydrate, Laboratory Grade Crystal

· Reference to other sections

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

- *Precautions for safe handling* No special precautions are necessary if used correctly.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes.
- Avoid contact with the eyes and skin.
- · Breathing equipment: Not required.
- · Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation \cdot **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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Trade name: Citric Acid Monohydrate, Laboratory Grade Crystal

• Eye protection:

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Tightly sealed goggles

9 Physical and chemical properties · Information on basic physical and chemical properties · General Information · Appearance: Form: Crystalline Color: White · Odor: **Odorless** · Odour threshold: Not determined. · *pH-value* (100 g/l) at 20 °C (68 °F): 1.6 · Change in condition Information not $^{\circ}C$ Melting point/Melting range: Boiling point/Boiling range: Information not $^{\circ}C$ 174 °C (345 °F) · Flash point: · Flammability (solid, gaseous): Product is not flammable. · Ignition temperature: 1010 °C (1850 °F) · Decomposition temperature: Not determined. · Auto igniting: Not determined. · Danger of explosion: Product does not present an explosion hazard. · Explosion limits: Lower: Not determined. Upper: Not determined. · Vapor pressure: Not applicable. · Density at 20 °C (68 °F): 1.542 g/cm³ (12.868 lbs/gal) · Bulk density at 20 °C (68 °F): 900 kg/m³ · Relative density Not determined. · Vapour density Not applicable. · Evaporation rate Not applicable. · Solubility in / Miscibility with 600 g/l *Water at 20 °C (68 °F):* · Partition coefficient (n-octanol/water): Not determined. · Viscosity: Dynamic: *Not applicable.* Kinematic: Not applicable. No further relevant information available. · Other information

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Trade name: Citric Acid Monohydrate, Laboratory Grade Crystal

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10 Stability and reactivity

- · Reactivity
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- \cdot Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

• Acute toxicity:

Oral

· LD/LC50 values that are relevant for classification:

LD50	5040 mg/kg (mouse)
	not available mg/kg (rat)
Germ cell mutagenicity	not available (rat)
Intraperitoneal	375 mg/kg (rat)

· Primary irritant effect:

• on the skin: No irritant effect.

- on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

· Toxicity

- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- · Additional ecological information:

· General notes:

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· Other adverse effects No further relevant information available.

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Trade name: Citric Acid Monohydrate, Laboratory Grade Crystal

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13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number	Not moved at a	
DOT, ADN, IMDG, IATA	Not regulated	
UN proper shipping name		
DOT, ADN, IMDG, IATA	Not regulated	
Transport hazard class(es)		
DOT, ADN, IMDG, IATA		
Class	Not regulated	
Packing group		
DOT, ĬMDG, IATA	Not regulated	
Environmental hazards:		
Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Anne	ex II of	
MARPOL73/78 and the IBC Code	Not applicable.	
Transport/Additional information:		
DOT	Not Regulated	
Remarks:	Not regulated	
IMDG		
Remarks:	Not regulated	
ΙΑΤΑ		
Remarks:	Not regulated	
UN "Model Regulation":	Not regulated	

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.

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Trade name: Citric Acid Monohydrate, Laboratory Grade Crystal

- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency) Substance is not listed.

- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- *GHS label elements* The substance is classified and labeled according to the Globally Harmonized System (GHS). *Hazard pictograms*



· Signal word Warning

· Hazard statements

Causes serious eye irritation.

· Precautionary statements

Wear eye protection / face protection.

Wash thoroughly after handling.

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.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department.

- · Contact: Mr. Nelson
- · Date of preparation / last revision
- Creation date for SDS 04-04-2014. STN 12/01/2014 / -

• Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

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