

# SAFETY DATA SHEET

According to US Regulation 29 CFR 1910.1200 (HazCom 2012)

## 1. Identification

**Product identifier:** Citric Acid, Monohydrate

**Other means of identification**

**Product No.:** 0110, 0115, 0116, 0117, 0118, 0119, 0120, 0616, 0627, 0770, 0771, 0772, 0773, 0780, 0790, 7788, BS07, CH08, LP01, 11213

**Recommended restrictions**

**Recommended use:** For Laboratory, Research or Manufacturing Use.  
**Restrictions on use:** Not determined.

**Details of the supplier of the safety data sheet**

**Company Name:** Avantor Performance Materials, LLC  
**Address:** 100 Matsonford Rd, Suite 200  
Radnor, PA 19087

**Telephone:** Customer Service: 855-282-6867

**Contact Person:** Product Information Compliance  
**E-mail:** info@avantormaterials.com

**Emergency telephone number:**  
CHEMTREC: 1-800-424-9300 within US and Canada

## 2. Hazard(s) identification

**Hazard Classification**

**Health Hazards**

Serious Eye Damage/Eye Irritation      Category 2A

**Unknown toxicity - Health**

Acute toxicity, dermal	100 %
Acute toxicity, inhalation, dust or mist	100 %

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Warning

<b>Hazard Statement:</b>	Causes serious eye irritation.
<b>Precautionary Statements</b>	
<b>Prevention:</b>	Avoid breathing dust. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.
<b>Response:</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
<b>Storage:</b>	Store locked up.
<b>Disposal:</b>	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
<b>Hazard(s) not otherwise classified (HNOC):</b>	None.

<b>3. Composition/information on ingredients</b>
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**Substances**

Chemical Identity	CAS number	Content in percent (%)*
Citric acid, monohydrate	5949-29-1	99 - 100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

<b>4. First-aid measures</b>
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<b>General information:</b>	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
<b>Ingestion:</b>	Rinse mouth thoroughly.
<b>Inhalation:</b>	Move to fresh air.
<b>Skin Contact:</b>	Remove contaminated clothing and wash the skin thoroughly with soap and water after work.
<b>Eye contact:</b>	Flush thoroughly with water. If irritation occurs, get medical assistance.

**Most important symptoms/effects, acute and delayed**

<b>Symptoms:</b>	Causes serious eye irritation. May cause irritation to skin, eyes and respiratory tract.
<b>Hazards:</b>	None known.

**Indication of immediate medical attention and special treatment needed**

<b>Treatment:</b>	Treat symptomatically. Symptoms may be delayed.
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<b>5. Fire-fighting measures</b>
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**General Fire Hazards:** Dust may form explosive mixture with air.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Water spray, fog, CO2, dry chemical, or regular foam.

**Unsuitable extinguishing media:** None known.

**Specific hazards arising from the chemical:** Dust may form explosive mixture with air.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. Ventilate closed spaces before entering them. Use personal protective equipment.

**Methods and material for containment and cleaning up:** Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Notification Procedures:** Inform authorities if large amounts are involved.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**7. Handling and storage**

**Precautions for safe handling:** Use personal protective equipment as required. Wear protective gloves/protective clothing/eye protection/face protection. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. See Section 8 of the SDS for Personal Protective Equipment. Do not eat, drink or smoke when using the product. Wash at the end of each work shift and before eating, smoking and using the toilet.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Store in a dry place. Store in a well-ventilated place.

**8. Exposure controls/personal protection**

**Control Parameters**  
**Occupational Exposure Limits**

None of the components have assigned exposure limits.

**Appropriate Engineering Controls** No data available.

**Individual protection measures, such as personal protective equipment**

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Eye/face protection:** Wear safety glasses with side shields (or goggles).

**Skin Protection**

**Hand Protection:** No data available.

**Other:** Wear suitable protective clothing and gloves.

**Respiratory Protection:** In case of inadequate ventilation use suitable respirator. Air-purifying respirator with a high efficiency particulate filter.

**Hygiene measures:** Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product.

**9. Physical and chemical properties**

**Appearance**

**Physical state:** Solid  
**Form:** Powder  
**Color:** White

**Odor:** Odorless

**Odor threshold:** No data available.

**pH:** 2.2 (0.70 g/l, 20 °C)

**Melting point/freezing point:** 135 °C

**Initial boiling point and boiling range:** (Decomposes)

**Flash Point:** Not applicable

**Evaporation rate:** No data available.

**Flammability (solid, gas):** No data available.

**Upper/lower limit on flammability or explosive limits**

**Flammability limit - upper (%):** No data available.

**Flammability limit - lower (%):** No data available.

**Explosive limit - upper (%):** No data available.

**Explosive limit - lower (%):** No data available.

**Vapor pressure:** < 0.01 hPa (25 °C)

**Vapor density:** No data available.

**Density:** 1.54 g/ml (20 °C)

**Relative density:** 1.54 (20 °C)

**Solubility(ies)**

**Solubility in water:** Soluble

**Solubility (other):** No data available.

**Partition coefficient (n-octanol/water):** No data available.

**Auto-ignition temperature:** 1,010 °C  
**Decomposition temperature:** No data available.  
**Viscosity:** No data available.

**Other information**

**Bulk density:** 650 kg/m<sup>3</sup>  
**Molecular weight:** 210.14 g/mol (C<sub>6</sub>H<sub>8</sub>O<sub>7</sub>.H<sub>2</sub>O)

**10. Stability and reactivity**

**Reactivity:** No dangerous reaction known under conditions of normal use.  
**Chemical Stability:** No data available.  
**Possibility of hazardous reactions:** Hazardous polymerization does not occur.  
**Conditions to avoid:** Excessive heat. Avoid conditions which create dust. Moisture.  
**Incompatible Materials:** None known.  
**Hazardous Decomposition Products:** Not determined.

**11. Toxicological information**

**Information on likely routes of exposure**

**Inhalation:** None known or expected under normal use.  
**Skin Contact:** None known or expected under normal use.  
**Eye contact:** Causes serious eye irritation.  
**Ingestion:** None known or expected under normal use.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

**Oral**  
**Product:** LD 50 (Rat): 6,730 mg/kg  
**Dermal**  
**Product:** No data available.  
**Inhalation**  
**Product:** No data available.

**Repeated dose toxicity**  
**Product:** None known.

**Skin Corrosion/Irritation**  
**Product:** May cause skin irritation.

**Serious Eye Damage/Eye Irritation**  
**Product:** Causes serious eye irritation.

**Respiratory or Skin Sensitization**

**Product:** Not a skin sensitizer.

**Carcinogenicity**

**Product:** This substance has no evidence of carcinogenic properties.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No mutagenic components identified

**In vivo**

**Product:** No data available.

**Reproductive toxicity**

**Product:** No components toxic to reproduction

**Specific Target Organ Toxicity - Single Exposure**

**Product:** None known.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** None known.

**Aspiration Hazard**

**Product:** Not classified

**Other effects:** None known.

<b>12. Ecological information</b>
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**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**  
**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**  
**Product:** There are no data on the degradability of this product.

**BOD/COD Ratio**  
**Product:** Not determined.

**Bioaccumulative potential**  
**Bioconcentration Factor (BCF)**  
**Product:** Not known.

**Partition Coefficient n-octanol / water (log Kow)**  
**Product:** No data available.

**Mobility in soil:** The product is water soluble and may spread in water systems.

**Other adverse effects:** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**13. Disposal considerations**

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Do not allow to enter drains, sewers or watercourses.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**  
Not regulated.

**IMDG**  
Not regulated.

**IATA**  
Not regulated.

**15. Regulatory information**

**US Federal Regulations**  
**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
 None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**  
 None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**  
 None present or none present in regulated quantities.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Serious eye damage or eye irritation

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

None present or none present in regulated quantities.

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Citric acid, monohydrate	10000 lbs.

**SARA 313 (TRI Reporting)**

None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):**

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**

No ingredient requiring a warning under CA Prop 65.

**US. New Jersey Worker and Community Right-to-Know Act**

No ingredient regulated by NJ Right-to-Know Law present.

**US. Massachusetts RTK - Substance List**

No ingredient regulated by MA Right-to-Know Law present.

**US. Pennsylvania RTK - Hazardous Substances**

No ingredient regulated by PA Right-to-Know Law present.

**US. Rhode Island RTK**

No ingredient regulated by RI Right-to-Know Law present.

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

Not applicable

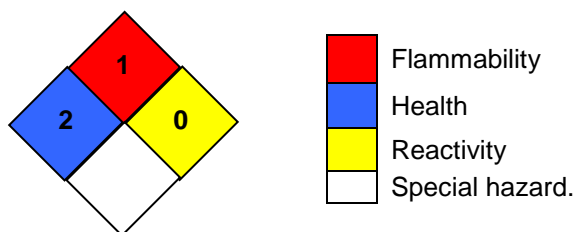


**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
Japan ISHL Listing:	Not in compliance with the inventory.

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

<b>Issue Date:</b>	02-15-2019
<b>Revision Information:</b>	Not relevant.
<b>Version #:</b>	2.5
<b>Source of information:</b>	Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.
<b>Further Information:</b>	No data available.

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