

Material Safety Data Sheets

Revision 2

1. IDENTIFICATION

Product Name	Citric Acid Monohydrate
Other Names	1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-, MONOHYDRATE; 2-Hydroxy-1,2,3-Propanetricarboxylic Acid Monohydrate; Betathydroxytricarballic acid
Code No	200-CAM-2
Uses	Unspecified.
Chemical Family	No Data Available
Chemical Formula	$C_6H_8O_7 \cdot H_2O$
Chemical Name	Citric Acid Monohydrate
Product Description	No Data Available
Company	Arman sina.co
Contact Information	info@armansina.com www.armansina.com

Hazard Categories	Irritant
Risk Phrases	Irritating to eyes, respiratory system and skin.
Safety Phrases	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.



3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Citric Acid Monohydrate	$C_6H_8O_7 \cdot H_2O$	5949-29-1	>99.50 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Rinse mouth with water. Give water to drink. Do NOT induce vomiting. If vomiting occurs, lean patient forward to prevent aspiration into the lungs. Seek medical attention.
Eye	Immediately flush eyes with plenty of water for 15 minutes, holding eyelids open. In all cases of eye contamination, it is a sensible precaution to seek medical advice.
Skin	Remove contaminated clothing. Wash affected area with plenty of water. If swelling, redness, blistering or irritation occurs, seek medical attention.
Inhaled	Remove victim from exposure to fresh air. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient.
Medical Conditions Aggravated by Exposure	No information available on medical conditions aggravated by exposure to this product.

5. FIRE FIGHTING MEASURES

General Measures	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.
Flammability Conditions	Product is a non-flammable solid.
Extinguishing Media	In case of fire, appropriate extinguishing media include water fog, carbon dioxide, foam, or dry chemical.
Fire and Explosion Hazard	Non-combustible solid. Fire or excessive heat may cause production of hazardous decomposition products.
Hazardous Products of Combustion	Fire or excessive heat may cause production of hazardous decomposition products.
Special Fire Fighting Instructions	Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Avoid accidents, clean up immediately. May be slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment. Avoid contact with eyes and skin. Do not Breathe dust.
Clean Up Procedures	Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled container and dispose of promptly as hazardous waste.
Containment	Stop leak if safe to do so. Isolate the danger area.
Decontamination	Cover contaminated surfaces with Soda ash or Sodium bicarbonate. Add water if necessary. Neutralise with Aluminium Hydroxide (NH ₄ OH) or 6M Hydrogen Chloride (HCL) as request. Wash down with water.
Environmental Precautionary Measures	Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.
Evacuation Criteria	Evacuate all unnecessary personnel.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product dust/fumes.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Protect from heat and direct sun exposures. Do Not store with oxide agents This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container	Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	<p>No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m3 (for inspirable dust) and 3mg/m3 (for respirable dust).</p> <p>NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.</p> <p>These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.</p>
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.
Personal Protection Equipment	<p>RESPIRATOR: NIOSH approved dust mask (AS1715/1716).</p> <p>EYES: Safety glasses with side shields (AS1336/1337).</p> <p>HANDS: Rubber gloves (AS2161).</p> <p>CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210).</p>
Work Hygienic Practices	Wash hands after contact with this material. Do not eat, drink, or smoke around this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Free-flowing Crystalline Powder
Odour	Odourless
Colour	White
pH	2.2 - 2.5 in solution at 5%
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Appreciable
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available

Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	1.542 g/ml
Specific Heat	No Data Available
Molecular Weight	210.1 g/Mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	Solubility In Water: 59.2 g/100 g Water (appreciable)
Potential for Dust Explosion	Dusts at sufficient concentrations can form explosive mixtures with air.
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

Chemical Stability	Product is stable under normal conditions of use, storage and temperature.
Conditions to Avoid	Protect from heat and direct sun exposures. High temperature, sparks, and open flames.
Materials to Avoid	Caustic (Alkalis). Solutions are mildly corrosive to Carbon.
Hazardous Decomposition Products	Fire or excessive heat may cause production of hazardous decomposition products.
Hazardous Polymerisation	Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	No toxicological information available for this product.
Eye/Irritant	Irritating to eyes.
Inhalation	Inhalation can cause Sore throat, cough, shortness of breath.
Skin/Irritant	Irritating to skin.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	No Data Available
Persistence/Degradability	Easily degradable. Air pollution: 50 mg/m3 for a mass emission > 0.5 Kg/h
Mobility	No information available on mobility for this product.
Environmental Fate	Avoid contaminating waterways, drains and sewers. Highly toxic for fish, not considered to be toxic for bacteria
Bioaccumulation Potential	No information available on bioaccumulation for this product.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local regulations. All empty packaging should be disposed of in accordance with Local Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. Bury in approved landfill. Incinerate under approved controlled procedures.

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	CITRIC ACID MONOHYDRATE
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Sea Transport IMDG

Proper Shipping Name	CITRIC ACID MONOHYDRATE
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No

Air Transport IATA

Proper Shipping Name	CITRIC ACID MONOHYDRATE
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

15. OTHER INFORMATION

Revision	2
Key/Legend	<p>< Less Than</p> <p>> Greater Than</p> <p>atm Atmosphere</p> <p>CAS Chemical Abstracts Service (Registry Number)</p> <p>cm Square Centimetres</p> <p>CO₂ Carbon Dioxide</p> <p>COD Chemical Oxygen Demand</p> <p>Degrees Celsius</p> <p>Degrees Fahrenheit</p> <p>g Grams</p> <p>g/cm Grams per Cubic Centimetre</p> <p>g/l Grams per Litre</p> <p>HSNO Hazardous Substance and New Organism</p> <p>IDLH Immediately Dangerous to Life and Health</p> <p>immiscible Liquids are insoluble in each other.</p> <p>inHg Inch of Mercury</p> <p>inH₂O Inch of Water</p> <p>K Kelvin</p> <p>kg Kilogram</p> <p>kg/m Kilograms per Cubic Metre</p> <p>lb Pound</p> <p>LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.</p> <p>LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.</p> <p>ltr or L Litre</p> <p>m Cubic Metre</p> <p>mbar Millibar</p> <p>mg Milligram</p> <p>mg/24H Milligrams per 24 Hours</p> <p>mg/kg Milligrams per Kilogram</p> <p>mg/m Milligrams per Cubic Metre</p> <p>Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.</p> <p>mm Millimetre</p> <p>mmH₂O Millimetres of Water</p> <p>mPa.s Millipascals per Second</p> <p>N/A Not Applicable</p> <p>NIOSH National Institute for Occupational Safety and Health</p> <p>NOHSC National Occupational Health and Safety Commission</p> <p>OECD Organisation for Economic Co-operation and Development</p> <p>Oz Ounce</p> <p>PEL Permissible Exposure Limit</p> <p>Pa Pascal</p> <p>ppb Parts per Billion</p> <p>ppm Parts per Million</p> <p>ppm/2h Parts per Million per 2 Hours</p> <p>ppm/6h Parts per Million per 6 Hours</p> <p>psi Pounds per Square Inch</p> <p>R Rankine</p> <p>RCP Reciprocal Calculation Procedure</p> <p>STEL Short Term Exposure Limit</p> <p>TLV Threshold Limit Value</p> <p>tne Tonne</p> <p>TWA Time Weighted Average</p> <p>ug/24H Micrograms per 24 Hours</p> <p>UN United Nations</p> <p>wt Weight</p>