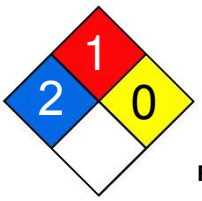
Material Safety Data Sheets



Revision 2

1. IDENTIFICATION

Product Name	**Citric Acid Solution**
Other Names	Citric Acid 50% w/v; Citric Acid 50% w/w
Uses	Food, cosmetic and pharmaceutical applications.
Chemical Family	No Data Available
Chemical Formula	C6H8O7
Chemical Name	1,2,3-Propanetricarboxylic acid, 2-hydroxy-
Product Description	No Data Available
Company	**Arman sina.co**
Contact Information	info@armansina.com **www.armansina.com**

2. HAZARD IDENTIFICATION

Hazard Categories			Skin Corrosion/Irritation - Category 2
			Serious Eye Damage/Irritation - Category 2A
			Specific Target Organ Toxicity (Single Exposure) - Category 3
Signal Word			Warning
Hazard Statements		**H315**	Causes skin irritation.
		H319	Causes serious eye irritation.
		H335	May cause respiratory irritation.
Precautionary Statements	Prevention	**P280**	Wear protective gloves/eye protection/face protection.
		P261	Avoid breathing mist/vapours/spray.
		P271	Use only outdoors or in a well-ventilated area.
	Response	**P302 + P352**	IF ON SKIN: Wash with plenty of water.
		P337 + P313	If eye irritation persists: Get medical advice.
		P312	Call a POISON CENTER or doctor if you feel unwell.
		P332 + P313	If skin irritation occurs: Get medical advice.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P304 + P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
		P362 + P364	Take off contaminated clothing and wash it before reuse.
	Storage	**P403 + P233**	Store in a well-ventilated place. Keep container tightly closed.
		P405	Store locked up.
	Disposal	**P501**	Dispose of contents/container in accordance with local / regional / national / international regulations.

Symbol

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Citric acid	C6H8O7	77-92-9	50 %
Water	H2O	7732-18-5	50 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth, then give plenty of water to drink. Do not induce vomiting. Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person.

Eye IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
*Take care not to rinse contaminated water into the non-effected eye!

Skin IF ON SKIN: Remove and isolate contaminated clothing and shoes. Immediately flush skin with running water for at least 15 minutes. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.

Inhaled IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

Advice to Doctor Treat symptomatically.

Medical Conditions Aggravated by Exposure No information available.

5. FIRE FIGHTING MEASURES

General Measures If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.

Flammability Conditions Non-combustible; However, following evaporation of aqueous component under fire conditions, the non-aqueous component may decompose and/or burn.

Extinguishing Media If material is involved in a fire, use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction.

Fire and Explosion Hazard Containers may explode when heated.

Hazardous Products of Combustion Fire may produce irritating and/or toxic gases, including Carbon oxides.

Special Fire Fighting Instructions Contain runoff from fire control water - Runoff may cause pollution.

Personal Protective Equipment Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

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

Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid breathing vapours and contact with

General Response Procedure	eyes, skin and clothing.
Clean Up Procedures	Pick up with sand or other non-combustible absorbent material and place into containers for later disposal (see SECTION 13).
Containment	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas.
Decontamination	After cleaning, flush away traces with water.
Environmental Precautionary Measures	Prevent entry into drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Evacuate all unnecessary personnel. Keep unauthorised personnel away.

Personal Precautionary Measures Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation - Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours/spray and contact with eyes, skin and clothing. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a cool, dry and well ventilated place, out of direct sunlight. Keep container tightly closed. Protect from damage - Inspect periodically for deficiencies such as damage or leaks. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10). Store locked up.
Container	Store in suitable, labelled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standards have been established for this material by Safe Work Australia.
Exposure Limits	No Data Available
Biological Limits	No information available.
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.
Personal Protection Equipment	- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Suitable mist respirator (refer to AS/NZS 1516 & 1517). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Chemical goggles. - Hand protection: Wear protective gloves. Recommended: Impervious gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls and rubber boots.
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off contaminated clothing and wash it before reuse, or discard.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear liquid
Odour	Characteristic
Colour	Colourless
pH	No Data Available

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	Miscible with water
Specific Gravity	1.19 - 1.29
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	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
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	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; However, following evaporation of aqueous component under fire conditions, the non-aqueous component may decompose and/or burn.
Reactions That Release Gases or Vapours	Decomposes on heating; may produce irritating and/or toxic gases, including Carbon oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Will slowly corrode mild steel.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with strong alkalis, mild steel.
	Decomposes on heating; may produce irritating and/or toxic gases, including Carbon oxides.

Hazardous Decomposition Products	
Hazardous Polymerisation	Hazardous polymerisation does not occur.

11. TOXICOLOGICAL INFORMATION

General Information	- Acute toxicity: May be harmful if swallowed. May cause irritation to the mouth, oesophagus, and stomach if ingested in large quantities. - Skin corrosion/irritation: Causes skin irritation. May cause skin redness (erythema). - Eye damage/irritation: Causes serious eye irritation. May cause redness and tearing of the eyes. - Respiratory/skin sensitisation: Not classified. - Germ cell mutagenicity: Not classified. - Carcinogenicity: Not classified. - Reproductive toxicity: Not classified. - STOT (single exposure): May cause respiratory irritation. May cause irritation to the mucous membrane and upper airways; Coughing and/or wheezing and difficulty in breathing. - STOT (repeated exposure): Not classified. - Aspiration toxicity: Not classified.
Acute	
Ingestion	Acute toxicity (Oral): COMPONENT: Citric acid (CAS No. 77-92-9): - LD50, Rats: 3,000 - 12,000 mg/kg bw. [NICNAS].
Other	Acute toxicity (Dermal): COMPONENT: Citric acid (CAS No. 77-92-9): - LD50, Rats: >2,000 mg/kg bw. [NICNAS].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	This chemical is a moderately acidic aqueous solution, and this property may cause adverse environmental effects. It has a high biological oxygen demand, and it may cause significant oxygen depletion in aquatic systems. If neutralised, it has low potential to affect aquatic organisms, secondary waste treatment microorganisms and the germination and growth of some plants.
Persistence/Degradability	This product is expected to be readily biodegradable.
Mobility	No information available.
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	This product is not likely to bioconcentrate.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	Citric Acid Solution
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
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

Proper Shipping Name	Citric Acid Solution
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
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

Proper Shipping Name	Citric Acid Solution
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
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

15. OTHER INFORMATION

Revision	2
Key/Legend	**< Less Than** **> Greater Than** **AICS Australian Inventory of Chemical Substances** **atm Atmosphere** **CAS Chemical Abstracts Service (Registry Number)** **cm² Square Centimetres** **CO2 Carbon Dioxide** **COD Chemical Oxygen Demand** **deg C (° C) Degrees Celcius** **EPA (New Zealand) Environmental Protection Authority of New Zealand** **deg F (° F) Degrees Farenheit** **g Grams** **g/cm³ Grams per Cubic Centimetre** **g/l Grams per Litre** **HSNO Hazardous Substance and New Organism** **IDLH Immediately Dangerous to Life and Health** **immiscible Liquids are insoluable in each other.** **inHg Inch of Mercury** **inH2O Inch of Water** **K Kelvin** **kg Kilogram** **kg/m³ Kilograms per Cubic Metre** **lb Pound** **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. **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. **ltr or L Litre** **m³ Cubic Metre** **mbar Millibar** **mg Milligram** **mg/24H Milligrams per 24 Hours** **mg/kg Milligrams per Kilogram** **mg/m³ Milligrams per Cubic Metre** **Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.** **mm Millimetre** **mmH2O Millimetres of Water** **mPa.s Millipascals per Second** **N/A Not Applicable** **NIOSH National Institute for Occupational Safety and Health** **NOHSC National Occupational Heath and Safety Commission** **OECD Organisation for Economic Co-operation and Development** **Oz Ounce** **PEL Permissible Exposure Limit** **Pa Pascal** **ppb Parts per Billion** **ppm Parts per Million** **ppm/2h Parts per Million per 2 Hours** **ppm/6h Parts per Million per 6 Hours** **psi Pounds per Square Inch** **R Rankine** **RCP Reciprocal Calculation Procedure** **STEL Short Term Exposure Limit** **TLV Threshold Limit Value** **tne Tonne** **TWA Time Weighted Average** **ug/24H Micrograms per 24 Hours** **UN United Nations** **wt Weight**