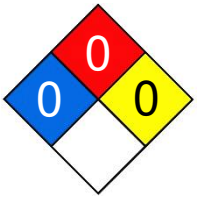

Material Safety Data Sheets

Revision 2

1. IDENTIFICATION

Product Name	**Sodium citrate, dihydrate**
Other Names	Citric acid, trisodium salt, dihydrate; Trisodium citrate, dihydrate
Uses	Intermediate; Formulation; Detergents and cleaning products; Personal care products; Paper industry; Construction products; Polymers and plastics; Oil industry; Textile industry; Paints and coatings; Photography products; Laboratory reagents; Water treatment; Treatment of metal surfaces; Medical devices.
Chemical Family	No Data Available
Chemical Formula	C6H5Na3O7.2H2O
Chemical Name	1,2,3-Propanetricarboxylic acid, 2-hydroxy-, trisodium salt, dihydrate
Product Description	No Data Available
Contact Information	Armansina.co info@armansina.com www.armansina.com

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)	Not Scheduled

Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sodium citrate, dihydrate	C6H5Na3O7.2H2O	6132-04-3	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get medical advice/attention.
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.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention.
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	Combustible solid; may burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction. *Use extinguishing measures appropriate to local circumstances and the environment.
Fire and Explosion Hazard	Avoid generating dust; Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Hazardous Products of Combustion	Fire may produce irritating and/or toxic gases, including Carbon monoxide (CO), Carbon dioxide (CO2).
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
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

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources (if dust clouds can occur). Do not touch or walk through spilled material - Slippery when spilt. Avoid accidents, clean up immediately! Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Pick up and transfer to properly labelled containers. Send for recovery or disposal according to official regulations (see SECTION 13).
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	After cleaning, flush away traces with water.
Environmental Precautionary Measures	Prevent entry into drains and waterways. If contamination of sewers or waterways has occurred advise local emergency services.
Evacuation Criteria	Spill or leak area should be isolated immediately. 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. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers closed when not in use - check regularly for spills. Protect from water/moisture. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard for Nuisance dusts: 8 hr TWA = 10 mg/m3 (measured as inhalable dust). - New Zealand WES for Particulates not otherwise classified: TWA = 10 mg/m3; TWA = 3 mg/m3 (respirable dust).
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: Dust mask/particulate respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields. - Hand protection: Handle with gloves. Recommended: Protective gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Protective work clothing.
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of work. Take off contaminated clothing and wash it before reuse. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline powder
Odour	Odourless
Colour	White
pH	7.6 - 9.0
Vapour Pressure	Negligible (Citric acid) (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	Decomposes
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Soluble in water (400 - 700 g/l) 20° C
Specific Gravity	approx. 1.7
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	150 ° C
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	Avoid generating dust; Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
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	Combustible solid; may burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating and/or toxic gases, including Carbon monoxide (CO), Carbon dioxide (CO2).
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Avoid generating dust. Keep away from heat and sources of ignition. Protect from water/moisture.
Materials to Avoid	Incompatible/reactive with strong oxidising agents, acids and bases, Sodium nitrite, Potassium nitrite.
Hazardous Decomposition Products	Fire/decomposition may produce irritating and/or toxic gases, including Carbon monoxide (CO), Carbon dioxide (CO2).
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: No adverse effects expected; however, large amounts may cause nausea and vomiting. - Eye contact: May cause physical/mechanical irritation. - Skin contact: Repeated or prolonged skin contact may lead to irritation. - Inhalation: Breathing in dust may result in respiratory irritation. Chronic effects: No information available.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Mouse: 5,400 mg/kg bw. [Read-across Citric acid; Supplier's SDS].
Other	Acute toxicity (Dermal): - LD50, Rat: >2,000 mg/kg [Read-across Citric acid; Supplier's SDS].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish: 440 mg/L (48 h) [Read-across Citric acid; Supplier's SDS]. - LC50, Crustacea (Daphnia magna): 1,535 mg/L (24 h) [Read-across Citric acid; Supplier's SDS]. - NOEC, Algae: 425 mg/L [Read-across Citric acid; Supplier's SDS].
	Biodegradable.
	Biodegradable.
Persistence/Degradability	
Mobility	No information available.
Environmental Fate	Slightly hazardous for water - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Bioaccumulation Potential	Does not accumulate in organisms.
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	Packaging that may not be cleansed must be disposed of in the same manner as the product.

14. TRANSPORT INFORMATION

Land Transport)
ADG Code

Proper Shipping Name	Sodium citrate, dihydrate
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.

Sea Transport
IMDG Code

Proper Shipping Name	Sodium citrate, dihydrate
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
IATA DGR

Proper Shipping Name	Sodium citrate, dihydrate
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
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (° C) Degrees Celcius
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