

Section 1. IDENTIFICATION

Product Name:	CITRIC ACID, Anhydrous
Other Names:	1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-; 2-Hydroxy-1,2,3-Propanetricarboxylic Acid; 2- Hydroxypropane-1,2,3-Tricarboxylic Acid; Citric Acid
Uses:	Food applications.
Chemical Family:	No Data Available
Chemical Formula:	C ₆ H ₈ O ₇
Chemical Name:	1,2,3-Propanetricarboxylic acid, 2-hydroxy-
Product Description:	Organic Acid

CONTACT DETAILS OF THE SUPPLIER OF THIS SAFETY DATA SHEET


Business:	Colonial Chemicals Australia
Address:	Skewes Road, Bendemeer, NSW, AUSTRALIA, 2355
Postal Address:	P.O Box 167 Moonbi, NSW, 2353
Phone:	02 67 696 658 Mobile: 0427 696658 Fax: 02 57015137
Email:	admin@colonialchemicals.com.au
Web Site:	www.colonialchemicals.com.au

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Poisons Information Centre	Westmead NSW	131126 or 1800-251525
Chemcall	Australia	1800-127406

Section 2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)	Not Scheduled
Globally Harmonised System	
Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories	Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Irritation – Category 2A Specific Target Organ Toxicity (Single Exposure) – Category 3
Pictograms	
Signal Word	WARNING
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Section 2. HAZARD IDENTIFICATION (Continued)

Hazard Statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary Statements

Prevention	P261	Avoid breathing dust.
	P264	Wash face, hands and any exposed skin thoroughly after handling.
	P271	Use only outdoors or in a well-ventilated area.
	P280	Wear protective gloves/protective clothing/eye protection /face protection.
Response	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P312	Call a POISON CENTER or doctor/physician if you feel unwell.
	P332 + P313	If skin irritation occurs: Get medical advice/attention.
	P337 + P313	If eye irritation occurs: Get medical advice/attention.
	P362	Take off contaminated clothing and wash before use.
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.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code).

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code).

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients

CHEMICAL ENTITY	FORMULA	CAS No.	PROPORTION (%)
CITRIC ACID	C6H8O7	77-92-9	<=100.0 %

Section 4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek medical advice.
Eye	Immediately wash in and around the eye area with large amounts of luke-warm water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre. Continue to wash with large amounts of water until medical help is available.
Skin	If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.
Inhaled	Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

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 which are aggravated by exposure to this product.

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Poisons Information Centre 131126 or Technical Officer 02 67 696 658

Section 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, foam or water spray for extinction.
Fire and Explosion Hazard	Dust explosion possible if in powder or granular form, mixed with air.
Hazardous Products of Combustion	Fire will produce irritating and/or toxic gases, Carbon oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways..
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) in combination with normal firefighting clothing (fire kit).
Flash Point	345 °C
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

Section 6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames). Do not touch or walk through spilled material. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Sweep or vacuum up material; if appropriate, moisten first to prevent dusting. Collect and seal in properly labelled containers for disposal (see SECTION 13).
Containment	Prevent entry into waterways, drains or confined areas.
Decontamination	Neutralise residues with lime or soda ash; Wash away remainder with plenty of water.
Environmental Precautionary Measures	Collect spillage; decontamination runoff may be washed to drains with large quantities of water; Due care must still be exercised to avoid unnecessary pollution of watercourses..
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away; Keep upwind.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in sect:8.

Section 7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation/dispersion. Avoid breathing dust and contact with eyes, skin and clothing. Wear protective gloves/eye protection/face protection (see SECTION 8). Dust explosion hazard; Keep away from heat and ignition sources - No smoking. Take precautionary measures against static discharge.
Storage	Store in a cool, dry and well-ventilated place. Keep container tightly closed - Check regularly for leaks. Avoid exposure to direct sunlight. Protect from moisture. Keep away from incompatible materials (strong oxidants, strong bases, metal nitrates and metals). Store locked up.
Container	Store in original packaging as approved by manufacturer.

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Section 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 (Nuisance dusts): 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). -New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ (total); TWA = 3 mg/m ³ (respirable). -OSHA PEL (Particulates not otherwise regulated): TWA = 15 mg/m ³ (total); TWA = 5 mg/m ³ (respirable).
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	RESPIRATOR: Dust mask (AS1715/1716). EYES: Safety glasses with side shields (AS1336/1337). HANDS: Wear impervious rubber gloves (AS2161). CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210).
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline Powder
Odour	ODOURLESS
Colour	Colourless to White
pH	1.5 - 2.5 (5 % solution)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	Decomposes
Melting Point	153 °C
Freezing Point	No Data Available
Solubility	59 g/100 mL water 20°C
Specific Gravity	1.665
Flash Point	345 °C
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	175 °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
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available

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Section 9. IDENTIFICATION (Continued)

Vapour Temperature	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	MAY FORM FLAMMABLE DUST CLOUDS IN AIR.
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 will produce irritating and/or toxic gases, Carbon oxides.
Release of Invisible Flammable Vapours and Gases	No Information Available

Section 10. STABILITY AND REACTIVITY

General Information	Reacts with oxidants and bases. Attacks metal.
Chemical Stability	Product is stable under normal conditions.
Conditions to Avoid	Avoid dust formation/dispersion. Keep away from heat and ignition sources. Avoid exposure to direct sunlight. Protect from moisture.
Materials to Avoid	Incompatible/reactive with strong oxidants, strong bases, metal nitrates and metals.
Hazardous Decomposition Products	Fire will produce irritating and/or toxic gases, Carbon oxides.
Hazardous Polymerisation	No Information Available

Section 11. TOXICOLOGICAL INFORMATION

General Information	Acute toxicity: No adverse affects expected; However, swallowing (large amounts) may cause abdominal pain, nausea, vomiting and irritation to the mouth and throat. Physiological disturbances may include acidosis and calcium deficiency; The substance may have effects on the teeth, resulting in erosion. Skin corrosion/irritation: May cause skin irritation, redness. Eye damage/irritation: Causes serious eye irritation. Respiratory/skin sensitisation: No evidence of sensitisation. Germ cell mutagenicity: No evidence of mutagenicity. Carcinogenicity: No evidence of carcinogenicity. Reproductive toxicity: No evidence of reproductive or developmental toxicity. STOT - single exposure: May cause respiratory irritation; Inhalation of citric acid aerosols may induce coughing and bronchoconstriction. STOT - repeated exposure: Not considered to cause serious damage to health from repeated exposure. Aspiration toxicity: No information available.
Acute	
Ingestion	Acute toxicity: - LD50, Rats: 3,000 - 12,000 mg/kg bw
Other	Acute toxicity: - LD50, Rats: 2,000 mg/kg bw [OECD TG 402].
Carcinogen Category	None

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: -LC50, Fish: 440mg/L (48 h) [OECD 203]. -EC50, Daphnia: 1,535 mg/L (24 h) [OECD 202]. -EC50, Algae: 425 mg/L (8 d).
Persistence/Degradability	Easily Biodegradable.
Mobility	No information available on mobility for this product.
Environmental Fate	Do NOT let product reach waterways, drains and sewers.
Bioaccumulation Potential	Low potential for bioaccumulation.
Environmental Impact	No Data Available

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Section 13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. Refer to waste management authority for disposal methods.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice.

Section 14. TRANSPORT INFORMATION

Land Transport (Australia):	ADG Code
Proper Shipping Name	CITRIC ACID ANHYDROUS
Class	No Data Available
Subsidiary Risk(s)	No Data Available
EPG	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Air	IATA
Proper Shipping Name	CITRIC ACID ANHYDROUS
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

Sea	IMDG
Proper Shipping Name	CITRIC ACID ANHYDROUS
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

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code).

Dangerous Goods Classification **NOT Dangerous Goods** according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code).

Section 15. REGULATORY INFORMATION

General Information	Not Scheduled
Poisons Schedule (Aust)	No Data Available
Australia (AICS)	Listed

Section 16. OTHER INFORMATION

Always use product as directed. Please read all labels carefully before using product. Further information may be obtained by contacting the Technical Officer on 0267 696 658. Supplied by Colonial Chemicals Australia.

SDS Revision Number:	3
SDS Revision Date:	27 JUNE 2017
Reason for issue:	Updated SDS (Replaces SDS issue 2 dated 18.11.2014)

In any event, the review and, if necessary, the re-issue of a SDS shall be no longer than 5 years after the last date of issue.

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Section 16. OTHER INFORMATION (Continued)

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product.

Key legend/Abbreviations/Acronyms that may be used in this S.D.S.:

<	Less Than
>	Greater Than
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)
AICS	Australian Inventory of Chemical Substances
atm	Atmosphere
CAS	Chemical Abstracts Service (Registry Number)
cm ²	Square Centimetres
CO ₂	Carbon Dioxide
COD	Chemical Oxygen Demand
deg C (°C)	Degrees Celcius
deg F (°F)	Degrees Fahrenheit
EPA (New Zealand)	Environmental Protection Authority of New Zealand
g	Grams
g/cm ³	Grams per Cubic Centimetre
g/l	Grams per Litre
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially
firefighters HSNO	Hazardous Substance and New Organism
IDLH	Immediately Dangerous to Life and Health
immiscible	Liquids are insoluble in each other.
inHg	Inch of Mercury
inH ₂ O	Inch of Water
K	Kelvin
kg	Kilogram
kg/m ³	Kilograms per Cubic Metre
lb	Pound
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.
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.
l or L	Litre
m ³	Cubic Metre
mbar	Millibar
mg	Milligram
mg/24H	Milligrams per 24 Hours
mg/kg	Milligrams per Kilogram
mg/m ³	Milligrams per Cubic Metre
Misc or Miscible	Liquids form one homogeneous liquid phase regardless of the amount of either component present
mm	Millimetre
mmH ₂ O	Millimetres of Water
mPa.s	Millipascals per Second
N/A	Not Applicable
NIOSH	National Institute for Occupational Safety and Health
NOHSC	National Occupational Health and Safety Commission
OECD	Organisation for Economic Co-operation and Development
Oz	Ounce
Pa	Pascal
PEL	Permissible Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
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
SDS	Safety Data Sheet
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
tne	Tonne
TWA	Time Weighted Average (TWA/ES - Time Weighted Average or Exposure Standard)
Ug/24	Micrograms per 24 Hours
UN	United Nations
Wt	Weight

END OF SDS

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