

Safety Data Sheet
Citric Acid Anhydrous
Revision 2, Date 18 Nov 2014

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	C6H8O7
Chemical Name	Citric Acid Anhydrous
Product Description	Organic acid

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	2132A E. Dominguez Street Carson CA 90810 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	No. 8, Block G, Ground Floor, Taipan 2 Jalan PJU 1A/3 Ara Damansara 47301, Petaling Jaya, Selangor, Malaysia	+60-3-7843-6833

Emergency Contact Details

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

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887


2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) No Data Available

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Safety Data Sheet Citric Acid Anhydrous Revision 2, Date 18 Nov 2014

Hazard Categories	Serious Eye Damage/Irritation - Category 2A Skin Corrosion/Irritation - Category 2 Specific Target Organ Toxicity (Single Exposure) - Category 3								
Pictograms									
Signal Word	Warning								
Hazard Statements	H319 Causes serious eye irritation. H315 Causes skin irritation. H335 May cause respiratory irritation.								
Precautionary Statements	<table><tr><td>Prevention</td><td>P280 Wear protective gloves/protective clothing/eye protection/face protection. P271 Use only outdoors or in a well-ventilated area. P264 Wash exposed skin thoroughly after handling. P261 Avoid breathing dust.</td></tr><tr><td>Response</td><td>P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/attention. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</td></tr><tr><td>Storage</td><td>P312 Call a POISON CENTER or doctor/physician if you feel unwell. P321 Specific treatment (see First Aid Measures on Safety Data Sheet). P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.</td></tr><tr><td>Disposal</td><td>P501 Dispose of contents/container in accordance with local / regional / national / international regulations.</td></tr></table>	Prevention	P280 Wear protective gloves/protective clothing/eye protection/face protection. P271 Use only outdoors or in a well-ventilated area. P264 Wash exposed skin thoroughly after handling. P261 Avoid breathing dust.	Response	P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/attention. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	Storage	P312 Call a POISON CENTER or doctor/physician if you feel unwell. P321 Specific treatment (see First Aid Measures on Safety Data Sheet). 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.
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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)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Health Hazards	6.1E	Substances that are acutely toxic –May be harmful, Aspiration hazard
		6.3B	Substances that are mildly irritating to the skin
		8.3A	Substances that are corrosive to ocular tissue

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

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 Data Available
Potential for Dust Explosion	May form flammable dust clouds in 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	High temperature, sparks, and open flames.
Materials to Avoid	Caustic (Alkalis). Solutions are mildly corrosive to Carbon Steel.
Hazardous Decomposition Products	Hazardous decomposition products may include noxious and toxic fumes of carbon monoxide and carbon dioxide.
Hazardous Polymerisation	Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Oral LD50 (rat): 3000 mg/kg. Oral LD50 (mice): 5040 mg/kg SKIN: Mild irritant (rabbit). EYES: Severe irritant (rabbit). Acute toxicity LD50 Oral - Rat - 5,400 mg/kg (OECD Test Guideline 401) LD50 Dermal - Rat - > 2,000 mg/kg (OECD Test Guideline 402) Skin corrosion/irritation Skin - Rabbit</p>
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	Result: Mild skin irritation (OECD Test Guideline 404) Serious eye damage/eye irritation Eyes - Rabbit Result: Irritating to eyes. (OECD Test Guideline 405) Respiratory or skin sensitisation Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.
Eyelrritant	A severe eye irritant. Contamination of eyes can result in permanent injury.
Ingestion	No adverse effects expected, however, large amounts may cause nausea and vomiting. Swallowing may result in irritation to the mouth and throat. Frequent or large oral doses can cause tooth erosion. This product is a permitted food additive. Ingestion of a large amount may cause digestive tract irritation.
Inhalation	Breathing in dust may result in respiratory irritation with sore throat, coughing and shortness of breath.
SkinIrritant	Contact with skin may result in irritation.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity Effects: Highly Toxic for fish, not considered to be toxic for bacteria. Air Pollution: 50mg/m3 for a mass emission >0.5Kg/h Toxicity to fish mortality LC50 - Leuciscus idus melanotus - 440 mg/l - 48 h (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates: static test - Daphnia magna (Water flea) - 1,535 mg/l - 24 h
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	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, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal 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.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG

Proper Shipping Name	CITRIC ACID ANHYDROUS
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

Land Transport (Malaysia)

ADR

Proper Shipping Name	CITRIC ACID ANHYDROUS
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

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	CITRIC ACID ANHYDROUS
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

Land Transport (United States of America)

US DOT

Proper Shipping Name	CITRIC ACID ANHYDROUS
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 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

Air Transport

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

National Transport Commission (Australia)

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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)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	No Data Available

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR003138
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National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Not Determined
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes

CIACID0200, CIACID0300, CIACID0301, CIACID0400, CIACID0401, CIACID0600, CIACID0601, CIACID0602, CIACID0603, CIACID0604, CIACID0605, CIACID0700, CIACID0701, CIACID0702, CIACID0800, CIACID0801, CIACID0900, CIACID0901, CIACID1000, CIACID1001, CIACID1002, CIACID1003, CIACID1004, CIACID1005, CIACID1006, CIACID1007, CIACID1008, CIACID1009, CIACID1010, CIACID1011, CIACID1012, CIACID1013, CIACID1014, CIACID1015, CIACID1016, CIACID1017, CIACID1018, CIACID1019, CIACID1020, CIACID1021, CIACID1022, CIACID1023, CIACID1024, CIACID1025, CIACID1026, CIACID1027, CIACID1028, CIACID1029, CIACID1030, CIACID1031, CIACID1032, CIACID1033, CIACID1034, CIACID1035, CIACID1036, CIACID1037, CIACID1038, CIACID1039, CIACID1040, CIACID1041, CIACID1042, CIACID1043, CIACID1044, CIACID1045, CIACID1046, CIACID1047, CIACID1048, CIACID1049, CIACID1050, CIACID1051, CIACID1052, CIACID1053, CIACID1054, CIACID1055, CIACID1056, CIACID1057, CIACID1058, CIACID1059, CIACID1060, CIACID1061, CIACID1062, CIACID1063, CIACID1064, 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Revision

2

Revision Date

18 Nov 2014

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)

EPA (New Zealand) Environmental Protection Authority of New Zealand

deg F (°F) Degrees Fahrenheit

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 insoluble 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 Health 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