



Global Spill Control Pty Ltd

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Revision Date : March 2007

Product Name : GLOBAL ALKALINE NEUTRALISER

Other Names : CITRIC ACID 2-HYDROXY-1,2,3-PROPANETRICARBOXYLIC ACID

Uses : Preparation of citrates, flavouring extracts, confections, soft drinks, effervescent salts, acidifier, dispersing agent, medicines, acidulant and antioxidant in foods, sequestering agent, water-conditioning agent and detergent builder, cleaning and polishing stainless steel and other metals, alkyd resins, mordant, removal of sulphur dioxide from smelter waste gases.

Organisation	Location	Telephone	Ask For
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia 318D Ti Rakau Drive East Tamaki New Zealand	+61 2 97333000 +64 9 2732777	Technical Officer
Poisons Information Centre	Westmead NSW Australia	131126 1800-251525	
Chemcall	Australia New Zealand	1800-127406 0800-243622	
National Poisons Centre	New Zealand	0800-764766	

2. HAZARD IDENTIFICATION

Hazardous according to criteria of NOHSC/ASCC

IRRITANT

Risk Phrases

- R36 Irritating to eyes.
- R37 Irritating to respiratory system.
- R38 Irritating to skin.

Safety Phrases

S24/25 Avoid contact with skin and eyes.

ERMA New Zealand Approval Code : No Data

HSNO Hazard Classification : No Data

This Material Safety Data Sheet may not provide exhaustive guidance for all HSNO Controls assigned to this substance. The ERMA website www.ermanz.govt.nz should be consulted for a full list of triggered controls and cited regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportions (%)
CITRIC ACID ANHYDROUS	[77-92-9]	min 99
WATER	[7732-18-5]	max 1

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed

If swallowed, rinse out mouth and then drink 1 - 3 cups of water. DO NOT induce vomiting. Seek medical attention if necessary.

Eye

Rinse immediately with tap water for 10 minutes - open eyelids forcibly. Consult a physician.

Skin

Remove contaminated clothing, wash affected skin with soap and water - DO NOT use any solvents.

Inhaled

Remove casualty to fresh air and keep him/her calm. Consult physician.

Advice to Doctor

Treat symptomatically based on individual reactions of patient and judgement of doctor.

Additional Information

Aggravated medical conditions caused by exposure

Chronic exposure may cause allergic reactions to some individuals.

5. FIRE FIGHTING MEASURES

Extinguishing Media

In case of fire, appropriate extinguishing media include water spray jet, dry powder, foam, or carbon dioxide.

Hazards from Combustion Products

Decomposes when exposed to fire conditions. Products of decomposition may include oxides of carbon, acrid smoke, and irritating fumes.

Special protective precautions and equipment for fire fighters

Fire fighters should wear a self contained breathing apparatus and full protective clothing along with protective equipment.

Flammability Conditions

Product is non-flammable.

Additional Information

Hazchem Code : N/A

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures

Personnel involved in the clean up should wear full protective clothing. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Do not allow product to reach drains, sewers or waterways. If the product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management Authority.

Methods and materials for containment and clean up

Collect spilled material into suitable containers and hold for later disposal. Flush away spill area residues with copious amounts of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Ensure an eye bath and safety shower are available and ready for use. Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibles

Store in a cool, dry, well-ventilated area. Keep containers tightly sealed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect from physical damage. Store away from incompatible materials. Storage temperature should stay between 10-25°C.

Container Type

Use glass, stainless steel, polyethylene, polypropylene, or PVC. Do not use aluminium, copper, zinc and steel.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards

No exposure standard has been established for this product by the Australian National Occupational Health and Safety Commission (NOHSC). However, the exposure standard for dust not otherwise specified is 10mg/m³ (for inspirable dust) and 3mg/m³ (for respirable dust).

Biological Limit Values

No information available on biological limits for this product.

Engineering Controls

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

RESPIRATOR: Effective dust mask. EYES: Suitable goggles or face protection. HANDS: Protective gloves. CLOTHING: Standard work uniform/clothing. Closed footwear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Colourless to white powder with a strong acidic taste

Formula

C₆H₈O₇

Odour

odourless

Vapour Pressure

Not Applicable

Vapour Density	Not Applicable
Boiling Point	Decomposes deg C
Melting Point	153°C deg C
Solubility in water	Soluble
Specific Gravity	1.542 (Water = 1)
Flash Point	Not Applicable
pH	2.2 (10g/l @ 20 deg C)
Flammability Limits (as percentage volume in air)	
Lower Explosion Limit	Not Applicable
Upper Explosion Limit	Not Applicable
Ignition Temperature	500°C
Specific Heat Value	Not Applicable
Particle Size	Not Applicable
Volatile Organic Compounds (VOC) content	Not Applicable
Evaporation Rate	Not Applicable
Viscosity	Not Applicable
Percent Volatile	No Data
Octanol/Water partition coefficient	Not Applicable
Saturated Vapour Concentration	Not Applicable
Additional Characteristics	Not Applicable
Flame Propagation/Burning Rate of Solid Materials	Not Applicable
Properties of materials that may initiate or contribute to fire intensity	Not Applicable
Potential for Dust Explosion	Dust may form explosive mixtures with air.
Reactions that Release Flammable Gases	Not Applicable
Fast or Intensely Burning Characteristics	Not Applicable
Non-flammables that could contribute unusual hazards to a fire	Not Applicable
Release of invisible flammable vapours and gases	No Data
Decomposition Temperature	No Data

Additional Information

Decomposition Temp: >170°C Bulk Density: 725kg/m³

10. STABILITY AND REACTIVITY

Chemical Stability : Product is stable under normal conditions of use and storage.

Conditions to avoid : Avoid extreme heat, high temperatures, static discharges and dusty conditions.

Incompatible Materials : Keep away from aluminium, copper, zinc, and steel. Keep away from potassium tartrate, alkalis, alkaline earth carbonates and bicarbonates, metal nitrates, acetates, and sulfides.

Hazardous Decomposition Products : Product will emit oxides of carbon, acrid smoke, and irritating fumes.

Hazardous Reactions : Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicity Data

Oral (rabbit) LD50: >7000 mg/kg. Oral (mouse) LD50: >5400 mg/kg. Oral (rat) LD50: >6730 mg/kg. Eye - strong irritant (rabbit): 750 ug/24hr. Skin - moderate irritant (rabbit): 500 mg/24hr. Chronic - well tolerated oral (rat): 2000 mg/kg/90 days. Not a carcinogen (rat, mouse), not a teratogenic. GRAS - generally recognised as safe for human consumption.

Health Effects - Acute

Swallowed

Adverse effects are not expected.

Eye

Irritating to eyes.

Skin

Contact with skin may result in moderate irritation.

Inhaled

Inhalation of dust or powder is likely to result in respiratory irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity : No Data

Persistence and degradability : Inherent biodegradability - 98% after 7 days.

Mobility : No information available on mobility for this product.

Additional information

Environmental fate (exposure) : No information available on environmental fate for this product.

Bioaccumulative potential : No information available on bioaccumulation for this product.

13. DISPOSAL CONSIDERATIONS

Disposal

Dispose of in accordance with all local, state and federal regulations.

Special Precautions for land fill or incineration

Dispose according to all local, state and federal regulations. Bury, incinerate or cover contaminated surface with soda ash or sodium bicarbonate. Neutralize with NH₄OH or HCL.

14. TRANSPORT INFORMATION

UN No.	Not Allocated
Shipping Name	CITRIC ACID ANHYDROUS
Dangerous Goods Class	None Allocated
Subsidiary Risk	None Allocated
Pack Group	None Allocated
Precaution for User	IRRITANT
Hazchem Code	N/A

15. REGULATORY INFORMATION

Poisons Schedule	N/A
EPG	N/A
AICS Name	1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-
NZ Toxic Substance	N
Additional information	No Data

16. OTHER INFORMATION

Additional information

Legend to abbreviations and acronyms:

<	less than
>	greater than
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstracts Service (Registry Number)
CO2	Carbon Dioxide
COD	Chemical Oxygen Demand
ERMA	Environmental Risk Management Authority
HSNO	Hazardous Substance and New Organism
IDLH	Immediately Dangerous to Life and Health
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
Misc	miscible
N/A	Not Applicable
NIOSH	National Institute for Occupational Safety and Health
NOHSC	National Occupational Health and Safety Commission
OECD	Organization for Economic Co-operation and Development
PEL	Permissible Exposure Limit
RCP	Reciprocal Calculation Procedure
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average
UN	United Nations (number)
cm ²	square centimetres
deg C (°C)	degrees Celsius
g	gram
g/cm ³	grams per cubic centimetre
g/l	grams per litre
immiscible	liquids are insoluble in each other
kg	kilogram
kg/m ³	kilograms per cubic metre
ltr	Litre
m ³	cubic metre
mPa.s	milli Pascal per second
mbar	millibar
mg	milligram
mg/24H	milligrams per 24 hours
mg/kg	milligrams per kilogram
mg/m ³	milligrams per cubic metre

miscible	liquids form one homogeneous liquid phase regardless of the amount of either component present
mm	millimetre
ppb	parts per billion
ppm	parts per million
ppm/2h	parts per million per 2 hours
ppm/6h	parts per million per 6 hours
tne	tonne
ug/24H	micrograms per 24 hours
wt	weight

Literature references:

No Data

Sources for data:

No Data

Contact Details:

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This MSDS summarises Global Spill Control Pty Ltd best knowledge of the health and safety hazard information of the selected substance and how to safely handle the selected substance in the workplace however Redox Pty Ltd expressly disclaims that the MSDS is a representation or guarantee of the chemical specifications for the substance. Each user should read the MSDS and consider the information in the context of how the selected substance will be handled and used in the workplace including its use in conjunction with other substances.