



# Material Safety Data Sheet

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Infosafe No. AE02V Issue Date : July 2003 ISSUED by AMTRADE

Product Name : **CITRIC ACID ANHYDROUS/MONOHYDRATE**

Classified as hazardous according to criteria of NOHSC

## COMPANY DETAILS

**Company Name** Amtrade International Pty Ltd (ABN 49 006 409 936)  
**Address** Level 6, 574 St Kilda Road  
Melbourne  
VIC. 3004 Australia  
**Emergency Tel.** 1800 033 111 Aust  
**Tel/Fax** Tel: 61 3 9229 9229 Fax: 61 3 9229 9290

## IDENTIFICATION

**Product Name** CITRIC ACID ANHYDROUS/MONOHYDRATE

**Proper Shipping Name** None Allocated

| <b>Other Names</b> | <b>Name</b>                                   | <b>Product Code</b> |
|--------------------|---|---------------------|
|                    | Citric Acid Anhyd. (Shih) 12-30 mesh 25kg     | 363448              |
|                    | Citric Acid Anhyd.BBCA 40-80 Mesh 25kg        | 332603              |
|                    | Citric Acid Anhyd.YUB 16-40 Mesh 1000kg       | 361429              |
|                    | Citric Acid Anhyd.YUB 16-40 Mesh 25kg         | 355429              |
|                    | Citric Acid Anhyd.YUB 30-100 Mesh 25kg        | 354406              |
|                    | Citric Acid Anhydrous (Shih) 30-100 Mesh 25kg | 364258              |
|                    | Citric Acid Anhyd.BBCA 10-40 Mesh 25kg        | 310150              |
|                    | o   |                     |
|                    | Citric Acid Monohydrate YUB 25kg              | 363340              |
|                    | Citric Acid Monohydrate 25kg                  | 360020              |
|                    | 2-Hydroxy-1,2,3-Propanetricarboxylic Acid.    |                     |
|                    | Citric Acid Monohydrate BP98 (RZBC) 25kg      | 359718              |
|                    | o   |                     |

**UN Number** None Allocated

**DG Class** None Allocated

**Packing Group** None Allocated

**Hazchem Code** None Allocated

**Poisons Schedule** Not Scheduled

**Product Use** Preparation of citrates, flavouring extracts, confections, soft drinks, effervescent salts; acidifier; dispersing agent; medicines; acidulant and anti-oxidant in foods; abscission of citrus fruits in harvesting; cultured dairy products.

## Physical Data

**Appearance** Colourless, odourless translucent crystals or powder, strongly acid taste; hydrated form is efflorescent in dry air.

**Melting Point** 151-157°C (Anhydrous)

**Boiling Point** Decomposes before boiling

**Vapour Pressure** Not applicable

**Specific Gravity** 1.54-1.67 (Anhydrous)

**Flash Point** Not available

**Flamm. Limit LEL** May form an explosive organic dust cloud.

**Explosion Data** LEL (dust): 8% UEL (dust): 65°C (Anhydrous form)

## Other Properties

**Volatile Component** <1% at 20°C

**Autoignition Temp.** 1010°C (Anhydrous)



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**pH Value** 2.2 (0.1 M sol'n as citric acid, anhydrous)  
**Form** Solid  
**Decomposition Temperature** Not available  
**Formula** C<sub>6</sub>-H<sub>8</sub>-O<sub>7</sub> or HOC(COOH)(CH<sub>2</sub>COOH)<sub>2</sub>  
**Molecular Weight** Anhydrous: 192.13 Monohydrate: 210.14  
**Other Information** SOLUBILITY: Very soluble in water (62%).  
Very soluble in Ethanol (38%).  
Moderately soluble in Ether (2.7%); Ethyl Acetate (5.3%).

## Ingredients

| Ingredients | Name                               | CAS       | Proportion |
|-------------|------------------------------------|-----------|------------|
|             | Citric Acid Anhydrous              | 77-92-9   | >99%       |
|             | Water                              | 7732-18-5 | <0.5%      |
|             | or                                 |           |            |
|             | Citric Acid Monohydrate            | 5949-29-1 | >99%       |
|             | Water Content from the Monohydrate | 7732-18-5 | 7.5-9 %    |

**Other Information** \* Typically 8.4-8.8%

## HEALTH HAZARD INFORMATION

### Health Effects

**Acute - Swallowed** Not harmful in small amounts. May be harmful if large amounts are accidentally swallowed.

**Acute - Eye** Severely irritating to the eyes.

**Acute - Skin** Moderately irritating organic acid with some allergenic properties.

**Acute - Inhaled** Irritating when inhaled. May be harmful if large amounts are inhaled. Causes coughing.

**Hazards Identification** Workplace Hazardous Substance.  
HAZARD CATEGORY: IRRITANT  
R36/37/38 - Irritating to eyes, respiratory system and skin.

**Chronic** Prolonged exposure in the diet can cause erosion of the teeth.

**Other Information** Citric acid elevates antibiotic blood levels of tetracyclines through enhanced absorption of the hydrogen chloride salt.

### First Aid

**Swallowed** Rinse mouth with water. Give plenty to drink. If vomiting occurs give further water. Seek medical advice.

**Eye** Irrigate with copious quantities of water for 15 minutes. In all cases of eye contamination it is a sensible precaution to seek medical advice.

**Skin** Wash contaminated skin with plenty of water. If irritation occurs, seek medical advice.

**Inhaled** Remove victim to fresh air.  
Keep at rest. Seek medical advice if effects persist.

**First Aid Facilities** Safety shower, eye wash plus normal washroom facilities nearby.

### Advice to Doctor

**Advice to Doctor** Treat symptomatically.

### Other Health Hazard Information

### PRECAUTIONS FOR USE



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Product Name : **CITRIC ACID ANHYDROUS/MONOHYDRATE**

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**Exposure Limits** No specific exposure standard established by NOHSC (Worksafe Australia).  
Nuisance Dust 10 mg/m<sup>3</sup> TWA.

**Eng. Controls** Normal dilution ventilation. Avoid generating and inhaling dusts. Keep containers closed when not in use.

## Personal Protection

**Protective Equip.** Avoid eye contact and repeated or prolonged skin contact.  
Wear impervious gloves (good - nitrile or neoprene; fair - rubber or latex).  
Wear protective overalls and chemical goggles.  
Always wash hands before smoking, eating, drinking or using the toilet.

## Flammability

**Fire Hazards** Not readily combustible. Will burn under fire conditions.  
The anhydrous powder may form an explosive organic dust cloud in air.

## SAFE HANDLING INFORMATION

### Storage and Transport

**Storage and Transport** Store in a cool, well ventilated, dry area. Store away from sources of heat, strong alkalis, and strong oxidizing agents. Keep tightly closed.  
Not defined as a Dangerous Good: by the Australian Code for the Transport of Dangerous Goods by Road & Rail; by the IATA Air Transport Dangerous Goods Regulations; or by the IMDG (International Maritime Dangerous Goods) Code.

**Proper Shipping Name** None Allocated

## Spills and Disposal

**Spills & Disposal** SPILLAGE: Clean up personnel may require protective equipment. Sweep up and shovel into clean, labelled containers. Avoid dust dispersal. Wash remaining residues to sewer. Prevent run-off from entering watercourses.  
DISPOSAL: In accordance with Local, State & Federal EPA waste regulations. Advise its irritant nature. Trace amounts may be flushed to sewer with large amounts of water.

## Fire/Explosion Hazard

**Fire/Explos. Hazard** Not normally a special hazard. Will melt, decompose and burn under fire conditions. Fine powders may form an explosive organic dust cloud.  
EXTINGUISHING MEDIA: Any, choose for the surrounding area.

**Hazardous Reaction** Stable under normal conditions.  
CONDITIONS TO AVOID: Dust cloud formation near ignition sources.  
INCOMPATIBLE MATERIALS: Strong alkalis (bases), strong oxidizers, metal nitrates. Corrodes copper, zinc, aluminium, antimony and their alloys.  
HAZARDOUS DECOMPOSITION PRODUCTS: Irritating dust, carbon monoxide.  
HAZARDOUS POLYMERISATION: Will not occur.

**Hazchem Code** None Allocated

## OTHER INFORMATION

**Toxicology** Acute Oral Toxicity LD50 (rat) : 5040 mg/kg  
Acute Oral Toxicity LD50 (rabbit): 7000 mg/kg

**Environ. Protection** Generally non-water polluting substance. Avoid contaminating waterways.  
Rapidly biodegradable.  
Acute Aquatic Toxicity LC50 (Gold Fish, 96hrs): 440-706 mg/L  
Acute Aquatic Toxicity EC0 (Bacteria, 18hrs) : >10000 mg/L  
Chemical Oxygen Demand (COD) : 728 mg O<sub>2</sub>/g  
Biological Oxygen Demand (BOD): 526 mg O<sub>2</sub>/g  
BIODEGRADABILITY: >98% after 2 days (OECD 302B)  
BIOACCUMULATION : None



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**Pkg. & Labelling**

Workplace Hazardous Substance.  
HAZARD CATEGORY: IRRITANT  
R36/37/38 - Irritating to eyes, respiratory system and skin.  
.  
S22 Do not breathe dust.  
S24/25 Avoid contact with skin and eyes.  
S37/39 Wear suitable gloves and eye/face protection.  
S26 In case of contact with eyes, rinse immediately with plenty of water  
and seek medical advice.  
S28 After contact with skin, wash immediately with plenty of water.  
.  
Not a Dangerous Good or Scheduled Poison.  
.

**User Codes**

Prepared by  
Authorised by  
NZ Schedule Poison S

**User Code**

JS0307-C  
D.Latta  
-

**Empirical Formula & Structural Formula**

C6-H8-O7 or HOC(COOH)(CH2COOH)2

**CONTACT POINT**

**Contact**

For EMERGENCIES ONLY Contact : 1800 033 111 (All Hours Australia)  
0800 734 607 (All Hours New Zealand)

Amtrade International Pty Ltd: 61 3 9229 9229 (Melbourne)  
61 2 9805 4200 (Sydney)  
Amtrade New Zealand Limited : 64 9 579 6767 (Auckland)

NOTE: This MSDS summarises our best knowledge of the health and safety hazard information on the product, and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company, or in the event of an emergency, the Emergency Response number above.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

...End Of MSDS...