



SAFETY DATA SHEET

PRODUCT NAME: CITRIC ACID

Issue Date: May 23

IDENTIFICATION

Product Name: Citric Acid Anhydrous
Other Names: Food additive 330, beta-hydroxycarboxylic acid
Product Code: CCA5, CCA25
Uses: Component acidulant in beverages, confectionary, effervescent salts, in pharmaceutical syrups, medicines, in effervescent powders and tablets. Used to adjust pH of foods and as synergistic antioxidant. Used in beverages, jellies, jams, preserves and candy to provide tartness. Manufacture of citrate salts. In processing of cheese. In electroplating. As sequestering agent to remove trace metals. As mordant to brighten colours. In analytical chemistry as reagent for albumin, mucin, glucose. Food Additive 330. Citric acid is a natural ingredient of many fruits. Citric acid occurs naturally in the body as a metabolite in the tricarboxylic acid cycle.
Supplier: HamChem Hamilton Chemicals Ltd, 75 Ruffell Rd, Te Rapa Park, Hamilton
Phone: 07 974 4971 Web: www.hamchem.nz Email: info@hamchem.nz

- In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.
- In case of poisoning phone National Poisons Centre – 0800 764 766

HAZARD IDENTIFICATION



GHS Classifications

Serious Eye Damage – Category 1

Specific Target Organ Toxicity (Single Exposure, Respiratory) – Category 3

Signal Word: Danger

Hazard Statements

H318 – Causes serious eye damage

H336 – May cause respiratory irritation

Prevention

P280 – Wear protective eye protection/face protection

P261 – Avoid breathing dust.

P271 – Use only outdoors or in a well-ventilated area.

Response

P305+ P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present, and easy to do so. Continue rinsing.

P310 – Immediately call a POISON CENTRE or Doctor/Physician

P304 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 – Call a POISON CENTRE or Doctor if you feel unwell.

Storage

P403 + P233 – Store in a well-ventilated place. Keep container tightly closed

P405 – Store locked up

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HamChem Ltd, 75 Ruffell Road, Hamilton, New Zealand. Phone: 07-974-4971 Email: info@hamchem.nz Web: www.hamchem.nz

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Disposal

P501 – Dispose of contents/container to approved waste facility in accordance with local regulations

COMPOSITION & INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportion (%)
Citric Acid, anhydrous	77-92-9	>99.5

FIRST AID MEASURES

If swallowed: Rinse mouth with water. Give water to drink. Do NOT induce vomiting. If vomiting occurs, lean patient forward to prevent aspiration into the lungs. Seek medical attention.

If on skin: Remove contaminated clothing. Wash affected area with plenty of water. If swelling, redness, blistering or irritation occurs, seek medical attention.

If inhaled: Remove victim from exposure to fresh air. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

If in eyes: Immediately flush eyes with plenty of water for 15 minutes, holding eyelids open. In all cases of eye contamination, it is a sensible precaution to seek medical advice.

Note to Physician: Treat symptomatically based on judgment of Doctor and individual reactions of patient.

FIRE FIGHTING MEASURES

General Measures: Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.

Flammability Conditions: Product is a non-flammable solid.

Extinguishing Media: In case of fire, appropriate extinguishing media include water fog, carbon dioxide, foam or dry chemical.

Fire & Explosion Hazard: Non-combustible solid. Fire or excessive heat may cause production of hazardous decomposition products.

Hazardous Products of Combustion: Fire or excessive heat may cause production of hazardous decomposition products.

Special Fire Fighting Instructions: Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

Personal Protective Equipment: Fire fighters should wear a positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).

ACCIDENTAL RELEASE MEASURES

General Response Procedure: Avoid accidents, clean up immediately. May be slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment. Avoid contact with eyes and skin. Do not breathe dust.

Clean Up Procedures: Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled container and dispose of promptly as hazardous waste.

Containment: Stop leak if safe to do so. Isolate the danger area.

Decontamination: Cover contaminated surfaces with Soda Ash or Sodium Bicarbonate. Add water if necessary. Neutralise with Aluminum Hydroxide or 6M Hydrogen Chloride. Wash down with water.

Environmental Precautionary Measures: Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local waste management.

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Evacuation Criteria: Evacuate all unnecessary personnel.

Personal Precautionary Measures: Personnel involved in the clean-up should wear full protective clothing as listed in Exposure Controls & Personal Protection section of this SDS.

HANDLING & STORAGE

Handling: Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale dust/fumes.

Storage: Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in Stability & Reactivity section of this SDS. Protect from heat and direct sun exposure. Do not store with oxide agents. Store in original packaging as approved by manufacturer.

EXPOSURE CONTROLS & PERSONAL PROTECTION
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Exposure standards: No exposure standard has been established for this product by Work Safe NZ. However, the exposure standard for dust not otherwise specified is 10mg/m³ (for inspirable dust) and 3mg/m³ (for respirable dust).

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 a 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 (PPE)

Personal respirators (NIOSH approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Skin protection: Use chemical safety goggles and/or a full-face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Personal protective equipment: Personal respirators, Skin protection, Eye protection.

PHYSICAL & CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Free-flowing crystalline powder
Odour	Odourless
Colour	White
pH	2.2-2.5 in solution at 5%
Vapour Pressure	No data available
Relative Vapour Density	No data available
Boiling Point	No data available
Melting Point	153°C
Freezing Point	No data available
Solubility	Appreciable
Specific Gravity	No data available

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Flash Point	No data available
Auto Ignition Temperature	No data available
Evaporation Rate	No data available
Bulk Density	No data available
Corrosion Rate	No data available
Decomposition Temperature	No data available
Density	1.542 g/ml
Specific Heat	No data available
Molecular Weight	210.1 g/Mol
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	Solubility in Water: 59.2 g/100g water
Potential for Dust Explosion	Dusts at sufficient concentrations can form explosive mixtures with 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 or Gases	No data available

STABILITY & REACTIVITY

Stability: Product is considered stable.

Hazardous polymerization: Will not occur.

Incompatibles: Avoid potassium tartrate, alkali and alkaline earth carbonates and bicarbonates, acetates, sulfides and metal nitrates. Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

TOXICOLOGICAL INFORMATION

Toxicity data: Oral (rat) LD50: 3000mg/kg

Irritation: Skin (rabbit): 500mg/24h – Mild
Skin (rabbit): 0.75mg/24h - SEVERE

ECOLOGICAL INFORMATION

Ecotoxicity (Aquatic & Terrestrial): Fish: LC50 > 100mg/L;
Algae IC50 = 80mg/L (72hr.);

Persistence/Degradability: Easily degradable. Air pollution: 50mg/m³ for a mass emission >0.5kg/h

Environmental Fate: Avoid contaminating waterways, drains and sewers. Highly toxic for fish, not considered to be toxic for bacteria.

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DISPOSAL CONSIDERATIONS

Recycle wherever possible. Bury residue in an authorised landfill. Recycle containers if possible, or dispose of in an authorised landfill. Containers may still present a chemical hazard/danger when empty. If a container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, and then puncture containers, to prevent re-use, and bury at an authorised landfill. Contact appropriate Waste Management Company for guidance and disposal options in your area. Where possible retain label warnings and SDS and observe all notices pertaining to the product.

TRANSPORT INFORMATION

Not regulated for transport of dangerous goods.

REGULATORY INFORMATION

HSNO Classifications: 8.3A, 6.1E

HSNO Approval #: HSR002503 – Additives, Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2020

MPI Approved (Generic 4.1.2) (All animal product except dairy) – may be used in areas where animal material or product is processed for human or animal consumption either as it is; or as an appropriate solution. When used in human consumption areas, all human consumption product and packaging material must be removed from the room. Food contact surfaces which have been treated with this substance must be thoroughly washed to remove all residues then rinsed with potable water.

OTHER INFORMATION

End of SDS.