

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: Citric Acid Anhydrous
 Product No:
 Product Use: For use in food, feed and technical industry
 Restrictions of Use: Refer to Section 15

New Zealand Supplier: Horticulture Ltd
 Address: 10 Firth Street
 Drury, 2113

Telephone: +64 9 294 8453
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New Zealand: **0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 13 July 2023

Section 2. Hazards Identification

Classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2017.

EPA Approval No: Additives, Process Chemicals and Raw Materials (Subsidiary) – HSR002503

Pictograms



Signal Word: **Warning**

GHS Classification and Category	Hazard Code	Hazard Statement
Specific target organ toxicity – single exposure Cat. 3 respiratory tract irritation	H335	May cause respiratory irritation.
Eye Irritation Cat 2.	H319	Causes serious eye irritation.

Prevention Code Prevention Statement

P103	Read carefully and follow all instructions.
P261	Avoid breathing dust, fumes, gas, mist, vapours or spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P338	Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove 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.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
P405	Store locked up.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

Disposal Code	Disposal Statement
P501	Refer to Section 13.

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Citric Acid	100	77-92-9

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.
If on Skin	In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters), seek medical advice with this Safety Data Sheet.
If Swallowed	Rinse mouth. Never give anything by mouth to an unconscious person. Keep the person warm and rest, seek medical attention if needed.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:	
Swallowed:	Not applicable.
Inhalation:	May cause respiratory irritation.
Eyes:	Causes serious eye irritation.
Skin:	Not applicable.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from combustion products	As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

Suitable Extinguishing media	In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.
Precautions for firefighters and special protective clothing	Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit). Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.
HAZCHEM CODE	None allocated

Section 6. Accidental Release Measures

Wear PPE as detailed in Section 8. Evacuate the surrounding area.

This product is not classified as hazardous to the environment. Keep product away from drains, surface and ground water.

Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal.

Section 7. Handling and Storage

Handling

- Read carefully and follow all instructions.
- Avoid breathing dust, fumes, gas, mist, vapours or spray.
- Use only outdoors or in a well-ventilated area.
- Wear protective clothing as detailed in Section 8.
- Keep containers hermetically sealed.
- Control spills and residues, destroying them with safe methods (section 6).
- Avoid leakages from the container.
- Maintain order and cleanliness where dangerous products are used.
- Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

Storage

- Store away from incompatible materials listed in Section 10.
- Keep out of reach of children.
- Store locked up.
- Store in a well-ventilated place. Keep container tightly closed.
- Technical measures for storage:
 - Minimum Temp.: 0 °C
 - Maximum Temp.: 40 °C
 - Maximum time: 24 Months
- Avoid sources of heat, radiation, static electricity and contact with food.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term

Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

PNEC:

Identification				
Citric Acid CAS: 77-92-9 EC: 201-069-1	STP	1000 mg/L	Fresh water	0.44 mg/L
	Soil	33.1 mg/kg	Marine water	0.044 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	34.6 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	3.46 mg/kg

Engineering Controls

Ensure adequate ventilation.

Personal Protective Equipment



Eyes	Panoramic glasses against splash/projections.
Hands	Wear protective gloves against minor risks.
Skin	Wear protective clothing. Wear anti-slip shoes.
Respiratory	Filter mask for gases and vapours.

Section 9 Physical and Chemical Properties

Appearance	Solid (crystalline)
Colour	White
Odour	Odourless
Odour Threshold	Not available
pH	Not available
pH solution	Not available
Boiling Point	Not available
Melting/Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	1.8% - 4.8%
Vapour Pressure	Not available
Density @ 20°C	1660 kg/m ³
Relative Density @ 20°C	1.66
Solubilities	Not available
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Dynamic Viscosity	Not available
Particle Characteristics	Not available
Other information: Heat of combustion	10.09 KJ/g

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	No data available
Hazardous Reactions	Under the specified conditions, hazardous reactions that lead to

	excessive temperatures or pressure are not expected.
Incompatible Materials	Avoid alkalis or strong bases.
Hazardous Decomposition Products	Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO ₂), carbon monoxide and other organic compounds.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. LD50 = 5400 mg/kg (rat)
Dermal	Not applicable. LD50 = >5000 mg/kg
Inhalation	May cause respiratory irritation. LC50 = >5 mg/L
Eye	Causes serious eye irritation.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12. Ecotoxicological Information

Not classified as dangerous to the environment.

Product specific aquatic toxicity:

Acute toxicity		Species	Genus
LC50	1516 mg/L (96 h)	Non-applicable	Fish
EC50	160 mg/L (48 h)	Non-applicable	Crustacean

Substance specific aquatic toxicity:

Product:							
Persistence and degradability	Degradability		Biodegradability				
	Citric Acid	BOD5 – N/A	Concentration	10 mg/L			
		COD – N/A	Period	28 days			
		BOD5/COD – N/A	% biodegradable	97%			
Bioaccumulation	Identification			Bioaccumulation potential			
	Citric Acid CAS: 77-92-				BCF	3	
					Pow Log	-1.55	
					Potential	Low	
Mobility in Soil	Identification		Absorption/desorption		Volatility		
	Citric Acid CAS: 77-92-			Koc	Non-applicable	Henry	N/A
				Conclusion	Non-applicable	Dry soil	N/A
				Surface tension	2.045E-2 N/m (350.93 °C)	Moist soil	N/A
Other adverse effects	No data available						

Section 13. Disposal Considerations

Disposal Method:

Triple rinse container and dispose as per Local Regulations.

Precautions or methods to avoid: None known.

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2020 and SNZ HB 5433:2021

Section 15 Regulatory Information

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: Additives, Process Chemicals and Raw Materials (Subsidiary) – HSR002503

Trigger quantities:

HSWA & EPA Controls	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	Not required
Emergency Response Plan	Not required
Secondary Containment	Not required
Restriction of Use	None

Section 16 Other Information

Glossary

Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

Issue Date: 13 July 2023

Review Date: 13 July 2028