

TelChem Citric Acid Solution

Telford Industries

Safety Data Sheet according to WHS and ADG requirements

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	TelChem Citric Acid Solution
Chemical Name	Not Available
Synonyms	Not Available
Proper shipping name	Not Applicable
Chemical formula	Not Available
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant Identified Uses	Food additives, Pharmaceutical syrups, Industrial processes.
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Details of the supplier of the safety data sheet

Company Name	Telford Industries
Address	7 Valentine Street Kewdale WA 6105 Australia
Telephone	+61 8 9353 2053
Website	https://www.telfordindustries.com.au/
Email	info@telfordindustries.com.au

Emergency telephone number

Association/Organisation	Not Available
Emergency telephone numbers	1800 429 628
Other Emergency telephone numbers	1800 HAZMAT


SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. NOT DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	Not Applicable
Classification	Skin Corrosion/Irritation Category 3, Serious Eye Damage/Irritation Category 1

Label Elements

GHS label elements	
SIGNAL WORD	DANGER

Hazard statement(s)



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H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary statement(s) Prevention

P264	Wash exposed skin thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s) Response

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.

Precautionary statement(s) Storage

P405	Store locked up.
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Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

CAS No	% [weight]	Name
77-92-9	10 – 50	citric acid
7732-18-5	balance	water

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ➢ Immediately hold eyelids apart and flush the eye continuously with running water. ➢ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ➢ Continue flushing until advised to stop by the Poisons Information Centre or for at least 15 minutes. ➢ Transport to hospital or doctor without delay. ➢ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ➢ Immediately flush body and clothes with large amounts of water, using safety shower if available. ➢ Quickly remove all contaminated clothing, including footwear. ➢ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ➢ Transport to hospital, or doctor.
Inhalation	<ul style="list-style-type: none"> ➢ If fumes or combustion products are inhaled remove from contaminated area. ➢ Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ➢ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ➢ Transport to hospital, or doctor, without delay.
Ingestion	<ul style="list-style-type: none"> ➢ For advice, contact a Poisons Information Centre or a doctor at once. ➢ Urgent hospital treatment is likely to be needed. ➢ If swallowed do NOT induce vomiting.



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	<ul style="list-style-type: none"> ➤ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ➤ Observe the patient carefully. ➤ Never give liquid to a person showing signs of being sleepy or with reduced awareness. ➤ Give water to rinse out mouth, then provide liquid slowly. ➤ Transport to hospital or doctor without delay.
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Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Simple antacid powders should be useful in the case of ingestion.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing Media

- Water spray or fog
- Foam
- Carbon dioxide
- Dry chemical powder

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ➤ Alert Fire Brigade and tell them location and nature of hazard. ➤ Wear full body protective clothing with breathing apparatus. ➤ Prevent, by any means available, spillage from entering drains or water course.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ➤ The material is not readily combustible under normal conditions. <p>Decomposition may produce toxic fumes of:</p> <ul style="list-style-type: none"> ➤ carbon monoxide (CO) ➤ carbon dioxide (CO₂) <p>May emit poisonous/corrosive fumes.</p>
HAZCHEM	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	<ul style="list-style-type: none"> ➤ Clean up all spills immediately. ➤ Avoid contact with skin and eyes. ➤ Control personal contact with the substance, by using protective equipment. ➤ Use dry clean up procedures and avoid generating dust. ➤ Place in a suitable, labeled container for waste disposal. ➤ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
Major Spills	<ul style="list-style-type: none"> ➤ Clear area of personnel and move upwind. ➤ Alert Fire Brigade and tell them location and nature of hazard.



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	<ul style="list-style-type: none"> ➤ Wear full body protective clothing with breathing apparatus. ➤ Prevent, by any means available, spillage from entering drains or water course. ➤ Consider evacuation (or protect in place). ➤ Collect recoverable product into labelled containers for recycling. ➤ Neutralize/decontaminate residue (see Section 13 for specific agent). ➤ Wash area and prevent runoff into drains. ➤ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. ➤ If contamination of drains or waterways occurs, advise emergency services.
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Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> ➤ Avoid all personal contact, including inhalation. ➤ Wear protective clothing when risk of exposure occurs. ➤ <u>When handling DO NOT eat, drink or smoke.</u> ➤ Keep containers securely sealed when not in use. ➤ Work clothes should be laundered separately. Use good occupational work practice. ➤ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained
Other Information	<ul style="list-style-type: none"> ➤ Store in original containers. ➤ Store in a cool, dry, well-ventilated area. ➤ Store away from incompatible materials and foodstuff containers. ➤ Protect containers against physical damage and check regularly for leaks.

Conditions for safe storage, including any incompatibilities

Suitable Container	<ul style="list-style-type: none"> ➤ DO NOT use mild steel or galvanised containers ➤ Polyethylene or polypropylene container. ➤ Check all containers are clearly labelled and free from leaks.
Storage Incompatibility	<ul style="list-style-type: none"> ➤ Avoid strong bases. (Reacts vigorously with alkalis.) ➤ Avoid reaction with oxidising agents.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available


EMERGENCY LIMITS

Ingredient	Material Name	TEEL-1	TEEL-2	TEEL-3
citric acid	citric acid	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
citric acid	Not Available	Not Available
water	Not Available	Not Available

MATERIAL DATA

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
Personal Protection	
Eye and Face protection	<ul style="list-style-type: none"> ➢ Safety glasses with imperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing. ➢ Chemical goggle. whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted. ➢ Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes.
Skin protection	See Hand protection below
Hands/feet protection	<ul style="list-style-type: none"> ➢ Elbow length PVC gloves
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ➢ Overalls. ➢ PVC Apron. ➢ PVC protective suit may be required if exposure severe. ➢ Eyewash unit. ➢ Ensure there is ready access to a safety shower.
Thermal hazards	Not Available

Respiratory protection

Type B-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear, slightly turbid liquid, miscible with water.		
Physical state	Liquid	pH as a Solution	Not Applicable
Odour	Not Available	Molecular Weight (g/mole)	Not Applicable
Odour threshold	Not Available	Flammability	Not Applicable
Relative density (water=1)	1.1 – 1.3	Upper Explosive Limit (%)	Not Applicable
Colour	Colourless to White	Lower Explosive Limit (%)	Not Applicable
pH (as supplied)	~2	Vapour pressure (kPa)	Not Available
Melting point/Freezing point (°C)	Not Available	Solubility in water (g/L)	Soluble
Initial boiling point and boiling range (°C)	Not Available	Vapour density (Air = 1)	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> ➢ Unstable in the presence of incompatible materials. ➢ Product is considered stable. ➢ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation.
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual.
Skin Contact	The material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals. Open cuts, abraded or irritated skin should not be exposed to this material.
Eye	When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.
Chronic	Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Product Name	TOXICITY	IRRITATION
citric acid	Dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit): 0.75 mg / 24 h - SEVERE
	Oral (rat) LD50: 3000 mg/kg ^[2]	Skin (rabbit): 500 mg / 24 h - mild
water	Oral (rat) LD50: >90000 mg/kg ^[2]	Not Available

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

citric acid	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.
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Acute Toxicity	⊖	Carcinogenicity	⊖
Skin Irritation/Corrosion	✓	Reproductivity	⊖
Serious Eye Damage/Irritation	✓	STOT – single exposure	✓
Respiratory or Skin sensitisation	⊖	STOT – repeated exposure	⊖
Mutagenicity	⊖	Aspiration Hazard	⊖

Legend:
 ✗ – Data available but does not fill the criteria for classification
 ✓ – Data required to make classification available
 ⊖ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpo int	Test Duration (hr)	Species	Value	Source
citric acid	LC50	96	Fish	9.23896mg/L	3
citric acid	EC50	96	Algae or other aquatic plants	23.29809mg/L	3
citric acid	EC0	72	Crustacean	<80mg/L	1
citric acid	NOEC	16	Crustacean	153mg/L	4
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
citric acid	LOW	LOW



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water	LOW	LOW
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Bio accumulative potential

Ingredient	Bioaccumulation
citric acid	LOW (Log KOW = -1.64)
water	LOW (Log KOW = -1.38)

Mobility in Soil

Ingredient	Mobility
citric acid	LOW (KOC = 10)
water	LOW (KOC = 14.3)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product/Packaging disposal	<ul style="list-style-type: none">➤ Containers may still present a chemical hazard / danger when empty.➤ Return to supplier for reuse/recycling if possible.➤ DO NOT allow wash water from cleaning or process equipment to enter drains.➤ In all cases disposal to sewer may be subject to local laws and regulations.➤ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.➤ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Not Applicable

Land transport (ADG), Air transport (ICAO-IATA / DGR), Sea transport (IMDG-Code / GGVSee)

Not Applicable

Transport in bulk according to Annex II of MARPOL and the IBC code

Source	Product name	Pollution Category	Ship Type
IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk	Citric acid (70% or less)	Z	3

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

CITRIC ACID (77-92-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated List

WATER (7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AICS	Y



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Canada - DSL	Y
Canada - NDSL	N (citric acid)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (water)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	<p>Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)</p>

SECTION 16 OTHER INFORMATION

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

Name	CAS No		
PC—TWA	Permissible Concentration-Time Weighted Average	PC—STEL	Permissible Concentration-Short Term Exposure Limit
IARC	International Agency for Research on Cancer	ACGIH	American Conference of Governmental Industrial Hygienists
STEL	Short Term Exposure Limit	TEEL	Temporary Emergency Exposure Limit
IDLH	Immediately Dangerous to Life or Health Concentrations	OSF	Odour Safety Factor
NOAEL	No Observed Adverse Effect Level	LOAEL	Lowest Observed Adverse Effect Level
TLV	Threshold Limit Value	LOD	Limit Of Detection
OTV	Odour Threshold Value	BCF	BioConcentration Factors
BEI	Biological Exposure Index		

END OF SDS