

SAFETY DATA SHEET

CITRIC ACID

Revision Date: 14-May-2015

Revision Number: 33

1. Product and Company Identification

Product Name

Product Trade Name: CITRIC ACID

Other Names

Synonyms: None

Product Code: HM004421

Recommended Use

Recommended Use: Scale Remover; pH Control

Uses Advised Against: No information available

Company Name, Address and Contact Details

Manufacturer/Supplier: Halliburton New Zealand
1 Paraite Rd,
Bell Block, New Plymouth
New Zealand Registration No.: 824207

E-Mail address: fdunexchem@halliburton.com

Emergency Telephone Number: +64-6-7559274

New Zealand National Poisons Centre: 0800 764 766 (24 hours)

2. Hazard(s) Identification

Statement of Hazardous Nature

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulation 2001;
Not Classified as dangerous good according to NZS 5433:2012, UN, IMDG or IATA

Classification

6.1E (Inhalation) Acutely Toxic Substances

6.3B Mildly irritating to the skin

8.3A Corrosive to ocular tissue

Hazard and Precautionary Statements

Hazard Pictograms



Signal Word: Danger

Hazard Statements: H316 - Causes mild skin irritation
H318 - Causes serious eye damage
H333 - May be harmful if inhaled

Precautionary Statements

Prevention: P101 - If medical advice is needed, have product container or label at hand

P102 - Keep out of reach of children
 P103 - Read label before use
 P104 - Read Safety Data Sheet before use.
 P280 - Wear eye protection/face protection

Response P304 + P312 - IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell
 P331 - Do NOT induce vomiting
 P332 + P313 - If skin irritation occurs: Get medical advice/attention
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a POISON CENTER or doctor/physician

Storage None

Disposal P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains

Substances	CAS Number	Substance HSNO Classification
Citric acid	77-92-9	6.1E (Inhalation) 6.3B 8.3A

2.3. Other Hazards

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
 This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

3. Composition and Information on Ingredients

Substances	CAS Number	PERCENT (w/w)
Citric acid	77-92-9	60 - 100%

4. First-Aid Measures

Requirements for First Aid or Medical Care

Inhalation If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Eyes Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin For skin contact, wipe away excess material with dry towel. Then wash affected areas with plenty of water, and soap if available, for several minutes. Get medical attention if irritation occurs.

Ingestion Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Workplace Facilities Required

None

Relation to Health Effect**Most Important Symptoms/Effects**

Causes eye irritation. Causes eye irritation

Medical Attention and Special Treatment**Notes to Physician**

Treat symptomatically

5. Fire-fighting measures

Type of Hazard**Flammability Hazard**

Combustible dust when in finely divided and highly suspended state.

5.1. Extinguishing media**Suitable Extinguishing Media**

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

HAZCHEM Code

Hazchem Code: None Allocated

Special Protective Equipment and Precautions for Fire Fighters**Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

Special Exposure Hazards

Decomposition in fire may produce harmful gases. Organic dust in the presence of an ignition source can be explosive in high concentrations. Good housekeeping practices are required to minimize this potential.

6. Spillage, Accidental Release Measures**6.1. Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Avoid creating and breathing dust. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Scoop up and remove.

6.4. Reference to other sections

See Section 8 and 13 for additional information.

7. Handling and storage**7.1. Precautions for Safe Handling****Handling Precautions**

Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

Handling Practices**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

Approved Handlers

This product does NOT require an approved handler.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry location. Product has a shelf life of 60 months.

Store Site Requirements

No special controls required

Packaging

No special packaging required

8. Exposure Controls and Personal Protection**Workplace Exposure Standards****Exposure Limits**

Substances	CAS Number	New Zealand WES	ACGIH TLV-TWA
Citric acid	77-92-9	Not applicable	Not applicable

Engineering Controls**Engineering Controls** Use in a well ventilated area.**Personal Protective Equipment (PPE)****Respiratory Protection**

If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard

Hand Protection	EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Dust/mist respirator. (N95, P2/P3)
Skin Protection	Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.35 mm thickness)
Eye Protection	This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.
Other Precautions	Normal work coveralls.
Hygiene Measures	Chemical goggles; also wear a face shield if splashing hazard exists. None known. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Solid	Color: White
Odor: Odorless	Odor Threshold: No information available

Property	Values
Remarks/ - Method	
pH:	1.8
Freezing Point/Range	No data available
Melting Point/Range	153 °C / 307.4 °F
Boiling Point/Range	Decomposes
Flash Point	345 °C / 653 °F
upper flammability limit	65
lower flammability limit	%
Evaporation rate	No data available
Vapor Pressure	0.00000221 Pa
Vapor Density	No data available
Specific Gravity	1.66
Water Solubility	Soluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	-1.61 to -1.80
Autoignition Temperature	1010 °C / 1832 °F
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

Molecular Weight	192.12
VOC Content (%)	No data available

10. Stability and Reactivity

10.2. Chemical Stability

Stable

10.4. Conditions to Avoid

None anticipated

10.5. Incompatible Materials

Strong alkalis.

10.6. Hazardous Decomposition Products

Carbon monoxide and carbon dioxide.

Hazardous Reactions

Hazardous Polymerization: Will Not Occur

11. Toxicological Information

Health Effect from Likely Routes of Exposure

Acute Toxicity

Inhalation Eye Contact Skin Contact Ingestion	May cause mild respiratory irritation. Causes eye irritation. May cause mild skin irritation. Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.
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Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

Toxicity Data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Citric acid	77-92-9	5400 mg/kg (Rat) 5790 mg/kg (Mouse) 11,700 mg/kg (Rat)	> 2000 mg/kg	No data available

Substances	CAS Number	Skin corrosion/irritation
Citric acid	77-92-9	Not irritating to skin in rabbits.

Substances	CAS Number	Eye damage/irritation
Citric acid	77-92-9	Causes severe eye irritation.

Substances	CAS Number	Skin Sensitization
Citric acid	77-92-9	Patch test on human volunteers did not demonstrate sensitization properties

Substances	CAS Number	Respiratory Sensitization
Citric acid	77-92-9	No information available

Substances	CAS Number	Mutagenic Effects
Citric acid	77-92-9	Did not show mutagenic effects in animal experiments

Substances	CAS Number	Carcinogenic Effects
Citric acid	77-92-9	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
Citric acid	77-92-9	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Citric acid	77-92-9	No data of sufficient quality are available.

Substances	CAS Number	STOT - repeated exposure
Citric acid	77-92-9	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Citric acid	77-92-9	No adverse health effects are expected from swallowing.

12. Ecological Information

12.1. Toxicity Ecotoxicity Effects

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Citric acid	77-92-9	NOEC (8d) 425 mg/L (cell density) (Scenedesmus quadricauda) LOEC (8d) >80 mg/L (Microcystis aeruginosa)	LC50 (96h) 1516 mg/L (Lepomis macrochirus) LC50 (48h) 440 mg/L (Leuciscus idus melanotus) LC50 (96h) >100 mg/L (Pimephales promelas)	TT (72h) 485 mg/L (Entosiphon sulcatum)	TLM96 100-330 ppm (Crangon crangon) EC50 (24h) 1535 mg/L (Daphnia magna) LC50 (48h) 160 mg/L (Daphnia magna) EC50 (48h) >50 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Citric acid	77-92-9	Readily biodegradable (97% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Citric acid	77-92-9	-1.61 to -1.80

12.4. Mobility in soil

Substances	CAS Number	Mobility
Citric acid	77-92-9	No information available

Ecotoxicity Hazard Statements

None known

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations

13.1. Waste treatment methods

Disposal Method

Contaminated Packaging

Bury in a licensed landfill according to federal, state, and local regulations.

Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

14. Transport Information

IMDG/IMO

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

NZ 5433.1999

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable

IATA/ICAO

UN Number: Not restricted
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable

Special Precautions for User: None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

15. Regulatory Information

New Zealand Inventory of Chemicals All components listed on inventory or are exempt.

Group Name Not Applicable
ERMA Register Approval Number HSR003138

HSNO Controls Refer to the NZ EPA website for more information: <http://www.epa.govt.nz>

Approved Handlers Not Applicable

Poisons Schedule: None Allocated

16. Other information

The following sections have been revised since the last issue of this SDS

Not applicable

Additional information For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key literature references and sources for data

www.ChemADVISOR.com/

OSHA

ECHA C&L

NZ CCID

Revision Date: 14-May-2015

Revision Note Revision Note

SDS sections updated:

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End of Safety Data Sheet