

SAFETY DATA SHEET



Version 9

1. Identification of the Substance / Preparation and of the Company / Undertaking

Product Name Citric Acid 50% FG
Product Code 900727
Recommended Use Industrial, Manufacturing or Laboratory use.
Restrictions on Use None known
Supplier
Anderson Chemical Company, 325 S Davis Avenue, Litchfield, MN 55355 (320-693-2477)
Emergency Telephone:
CHEMTREC (US): 1-800-424-9300

2. Hazards Identification

GHS - Classification

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements



Signal Word: Danger

Hazard Statements:

- Causes severe skin burns and eye damage

Precautionary Statements:

- Do not breathe dusts or mists
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- Immediately call a POISON CENTER or doctor/physician
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- Store locked up
- Dispose of contents/ container to an approved waste disposal plant

3. Composition / Information on Ingredients

Chemical name	CAS No.	Weight-%
Citric acid	77-92-9	49-51
Water	7732-18-5	49-51

Any concentration shown as a range is due to batch variation or the exact percentage has been withheld as a trade secret.

4. First Aid Measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Burning. Coughing and/ or wheezing. Redness. May cause blindness.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

5. Fire-fighting Measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous combustion products	Carbon oxides.
Explosion Data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material (e.g.

sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

Incompatible materials Will corrode copper, zinc, aluminum, and their alloys. Metal nitrates. Strong oxidizing agents. alkali carbonates and bicarbonates. Potassium tartrate.

8. Exposure Controls / Personal Protection

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield. Tight sealing safety goggles.
Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.
Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State:	Liquid	Odor:	Odorless
Appearance:	Clear	Odor Threshold:	No information available
Color:	Colorless to yellowish		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH:	2	pH Range: <2
Salt Out Point:		No information available
Melting Point/Freezing Point:	-7 °C / 19 °F	
Boiling Point/Boiling Range:		No information available
Flash Point:		No information available
Evaporation Rate (BuAc=1):		No information available
Flammability (solid, gas)		No information available
Flammability Limits in Air:		No information available

Upper Flammability Limit:		Lower Flammability Limit:
Vapor Pressure (mm Hg):		No information available
Vapor density (Air =1)		No information available
Specific Gravity (H₂O=1):	1.245	
Specific Gravity (2nd value):		
Water Solubility:		No information available
Solubility(ies):		No information available
Partition Coefficient (n-octanol/water)		No information available
Autoignition Temperature:		No information available
Decomposition Temperature:		No information available
Kinematic Viscosity:		No information available
Dynamic Viscosity:		No information available
Oxidizing Properties:	No information available	
Explosive Properties:	Not considered to be an explosion hazard	

9.2. Other information

Softening Point:	No information available
Molecular Weight:	192.13
VOC Content(%):	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and Reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Exposure to air or moisture over prolonged periods.
Incompatible materials	Will corrode copper, zinc, aluminum, and their alloys. Metal nitrates. Strong oxidizing agents. alkali carbonates and bicarbonates. Potassium tartrate.
Hazardous decomposition products	Carbon oxides.

11. Toxicological Information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.
Eye contact	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Causes severe burns.
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Numerical measures of toxicity

No information available

Acute Toxicity:

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 5,882.35 mg/kg
 ATEmix (dermal) 3,925.50 mg/kg

Unknown Acute toxicity 51 % of the mixture consists of ingredient(s) of unknown toxicity
 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
 51 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 51 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 51 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD ₅₀ :	Dermal LD ₅₀ :	LC ₅₀ (Lethal Concentration):
Citric acid 77-92-9	= 3 g/kg (Rat)	> 2000 mg/kg (Rat)	-
Water 7732-18-5	> 90 mL/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes severe burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Other Adverse Effects:
Aspiration hazard No information available.

12. Ecological Information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Citric acid 77-92-9	-	1516: 96 h Lepomis macrochirus mg/L LC50	-	-

Ceriodaphnia dubia Acute Toxicity Evaluation: Citric Acid 50%: 48-hour NOEC: 250 ppm; 48-hour LOEC: 500 ppm; 48-hour LC50: 329.88 ppm (299.82-362.95 ppm)

Persistence and Degradability: No information available.
Bioaccumulation: There is no data for this product.

Component Information

Chemical name	Partition Coefficient:
Citric acid 77-92-9	-1.72

Other Adverse Effects: No information available.

13. Disposal Considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging Do not reuse empty containers.
US EPA Waste Number (product as supplied) D002.

14. Transport Information

DOT
Description Not DOT Regulated

15. Regulatory Information

International Inventories

AICS Complies
TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECL Complies
PICCS Complies

Chemical name	AICS	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS
Citric acid	Present	Present ACTIVE	Present	-	Present	-	Present	Present [25349]	Present	Present
Water	Present	Present ACTIVE	Present	-	Present	-	Present	Present [32224]	Present	Present

Inventory Legend

AICS - Australian Inventory of Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

RESTRICTIONS - REACH TITLE VII No information available

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

SARA 311/312 Hazard Categories

Serious eye damage or eye irritation
Skin corrosion or irritation

16. Other Information

NSF/ANSI 60 Certification



Maximum Use (mg/L unless otherwise indicated):	60
Prepared By:	HSE Department
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Revision Note:	Updated Section 15

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet