

Safety Data Sheet

CITRIC ACID SOLUTION 50% F.G.

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SECTION 1: Identification

Identification

Product Name : CITRIC ACID SOLUTION 50% F.G.
Product code : AC5095
CAS-No. : MIXTURE
Synonyms : 2-hydroxy-1,2,3-propanetricarboxylic acid;;Beta-hydroxytricarballic acid
Recommended use : For use in food processing
Restrictions on use : No additional information available

Supplier

Hydrite Chemical Co.
17385 Golf Parkway
Brookfield, WI, 53045
T 262-792-1450

Emergency telephone number

EMERGENCY RESPONSE NUMBERS:

24 Hour Emergency #: (414) 277-1311

CHEMTREC Emergency #: (800) 424-9300

SECTION 2: Hazard(s) identification

Classification of the substance or mixture

GHS US classification

Corrosive to metals Category 1

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2A

GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

May be corrosive to metals
Causes skin irritation
Causes serious eye irritation

Precautionary statements (GHS US)

Disposal :

Keep only in original container.
Wash hands thoroughly after handling.
Wear protective clothing, eye protection, face protection.

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Response : IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see supplemental first aid instruction on the SDS).
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Absorb spillage to prevent material-damage.

Storage : Store in corrosive resistant container with a resistant inner liner.

Hazards not otherwise classified

Hazards not otherwise classified : No additional information available

Unknown acute toxicity (GHS US)

Unknown acute toxicity (GHS US) : 50% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/Information on ingredients

Substances/ Mixtures

Name	Product identifier	%	GHS US classification
CITRIC ACID	CAS-No.: 77-92-9	50 – 75	Eye Irrit. 2A, H319 STOT SE 3, H335 Comb. Dust

*Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

SECTION 4: First-aid measures

Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.
First-aid measures after skin contact : If on skin: Flush skin with plenty of water while removing contaminated clothing and shoes. Do not reuse clothing or shoes until cleaned. If irritation develops or persists, get medical attention.
First-aid measures after eye contact : If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention.
First-aid measures after ingestion : If swallowed: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause moderate irritation. May be irritating to the mucous membranes and to the respiratory system.
Symptoms/effects after skin contact : May cause moderate irritation. Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Symptoms/effects after eye contact : May cause severe irritation. Symptoms may include: Redness, burning sensation.
Symptoms/effects after ingestion : May cause irritation to the digestive tract. Irritation of the gastric/intestinal mucosa. Burns to the gastric/intestinal mucosa. Erosion of teeth is possible. Symptoms include: burning sensation, gastrointestinal pain.

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Immediate medical attention and special treatment, if necessary : Treat symptomatically. No specific antidote known. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard.

Reactivity in case of fire : Contact with metals could evolve flammable hydrogen gas.

Hazardous decomposition products : Toxic fumes may be released. Carbon oxides (CO, CO₂).

Firefighting instructions : Evacuate personnel to a safe area. Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Cool down the containers exposed to heat with a water spray.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures : Corrosive material. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Protective equipment : Do not attempt to take action without suitable protective equipment. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions

Environmental precautions : Avoid release to the environment. Notify authorities if product enters sewers or public waters.

Methods and material for containment and cleaning up

For containment : Contain spill. Do not touch or walk on the spilled product. Stop leak, if possible without risk.

Methods for cleaning up : Carefully neutralize spilled liquid, using : Sodium carbonate (soda ash). sodium bicarbonate. limestone powder. Adequate ventilation is required to eliminate any carbon or nitrogen oxides emitted during the neutralization process. Repeat the neutralization step if suspected corrosive liquid is still observed. Take up the neutralized liquid into an absorbent material. Place into drums for proper disposal. Flush remaining area with plenty of water to remove trace residue and dispose of properly.

Other information : Dispose of materials or solid residues at an authorized site.

Reference to other sections : For further information refer to section 13.

SECTION 7: Handling and storage

Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing vapors, mist, dust.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Do NOT taste or swallow.

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Conditions for safe storage, including any incompatibilities

Technical measures	: Corrosive material. aqueous solution may be corrosive to metals.
Storage conditions	: Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers.
Incompatible materials	: Metals.
Packaging materials	: Always store product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

Control parameters

Component	ACGIH	OSHA
CITRIC ACID	No data available	No data available

Appropriate engineering controls

Appropriate engineering controls	: General room ventilation and local exhaust are required. Avoid creating dust or mist. Maintain adequate ventilation. Do not use in closed or confined spaces.
Environmental exposure controls	: Avoid release to the environment.

Individual protection measures/Personal protective equipment

Personal protective equipment	: Wear recommended personal protective equipment.
Hand protection	: Protective gloves. Chemical-resistant.
Eye protection	: Wear chemical safety goggles while handling this product. If splashing of liquid may occur, then wear chemical safety goggles and/or face shield.
Skin and body protection	: Protective gloves: Chemical-resistant. Prevent contact with this product. Wear gloves and protective clothing depending on condition of use.
Respiratory protection	: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If dust or mist is present, wear: NIOSH-Approved respirator. NIOSH-Approved respirator for dusts and mists. NIOSH-Approved air-purifying respirator with: Dust/mist filter. NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.
Other information	: Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking. Protective equipment. Eye-wash station. Safety shower. Protective clothing. Rubber apron.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Clear. Colorless to slightly yellow.
Odor	: Mild odor.
Odor threshold	: No data available
pH	: < 1
pH solution concentration	: 100 %
Melting point	: Not applicable
Freezing point	: ~ 5 °F
Boiling point	: ≈ 219 °F
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available

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Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 1.237 @ 25 °C
Solubility	: Complete.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 10 cP @ 25 °C
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

SECTION 10: Stability and reactivity

Information on stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: Elevated temperature.
Incompatible materials	: alkalis. amines. bases. strong oxidizing agents. sulfides. carbonates. acetates. potassium tartrate. metal nitrates. reducing agents. bicarbonates. alkali metals. copper, aluminum, zinc and their alloys. lead. oxides of sulfur. fiber-reinforced polyester. steel. brass. cast iron. reactive metals.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Numerical measures of toxicity			
Component	Oral LD50	Dermal LD50	Inhalation LC50
CITRIC ACID	Rat: 3 g/kg	Rat:> 2000 mg/kg	No data available

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects	: No additional information available
Symptoms/effects after inhalation	: May cause moderate irritation. May be irritating to the mucous membranes and to the respiratory system.
Symptoms/effects after skin contact	: May cause moderate irritation. Prolonged or repeated skin contact may cause drying, cracking, or irritation.

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Symptoms/effects after eye contact : May cause severe irritation. Symptoms may include: Redness, burning sensation.
Symptoms/effects after ingestion : May cause irritation to the digestive tract. Irritation of the gastric/intestinal mucosa. Burns to the gastric/intestinal mucosa. Erosion of teeth is possible. Symptoms include: burning sensation, gastrointestinal pain.
Other information : No additional information available

SECTION 12: Ecological information

Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

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LC50 - Fish [1]	190 mg/l P. Promelas (fathead minnow)
EC50 - Crustacea [1]	210.2 mg/l C. dubia
NOEC chronic fish	125 mg/l P. Promelas (fathead minnow)
NOEC chronic crustacea	31.25 mg/l C. dubia

Persistence and degradability

No additional information available

SECTION 13: Disposal considerations

Disposal methods

Regional waste regulation : U.S. - RCRA (Resource Conservation Recovery Act) - D Series Wastes - Corrosivity D002.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions. Since emptied containers retain product residue, follow label warnings even after container is emptied.
Additional information : Do not re-use empty containers. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition.

SECTION 14: Transport information

Modes of transport

DOT (Department of Transportation):

Identification Number (DOT) : UN3265
Proper Shipping Name (DOT) : Corrosive liquid, acidic, organic, n.o.s. (CONTAINS : CITRIC ACID)
Hazard Class (DOT) : 8
Packing group (DOT) : III
Labels Required (DOT) : Corrosive



IMDG (International Maritime Dangerous Goods Code):

Identification Number (IMDG) : UN3265
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Citric Acid)
Hazard Class (IMDG) : 8
Packing group (IMDG) : III
Labels Required (IMDG) : Corrosive substances



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IATA (International Air Transport Association):

Identification Number (IATA) : UN3265
Proper Shipping Name (IATA) : Corrosive liquid, acidic, organic, n.o.s. (CITRIC ACID)
Hazard Classes (IATA) : 8
Packing group (IATA) : III
Labels Required (IATA) : Corrosive



Environmental hazards

Other information : Not regulated by the DOT under exception 173.154 (d) for materials corrosive to metals (steel and or aluminum). The transportation classifications provided on this SDS are for informational purposes only and based upon the properties of the product as described in this document. The listed transportation classifications may not address variations due to changes in package size, mode of shipment, regional or country regulations, or other regulatory descriptors.

SECTION 15: Regulatory information

US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

International Regulations

No additional information available

US State regulations

No additional information available

SECTION 16: Other information

Hazard Rating System

Health: 2
Flammability: 0
Physical: 0

NFPA Rating System

NFPA health hazard: 2
NFPA fire hazard: 0
NFPA reactivity: 0

Abbreviations and acronyms

HAP	Hazardous Air Pollutant
VOC	Volatile Organic Compound

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Abbreviations and acronyms	
STEL	Short Term Exposure Limit
TWA	Total Average Weight
RQ	Reportable Quantity

Revision date: 3/20/2024

Supersedes: 12/11/2023

Issue date: 1/6/2000

Reason for Revision: Changes made throughout the SDS.New format.

SDS Prepared by: AF

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