



# Food Grade Citric Acid 50% (AFCO 0236)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 03/03/2023

Version: 1.2

### SECTION 1: IDENTIFICATION

#### Product Identifier

**Product Form:** Mixture

**Product Name:** Food Grade Citric Acid 50%

**Product Code:** AFCO 0236

#### Intended Use of the Product

Citric acid for use in food processing & cleaning food processing equipment. For professional use only.

#### Name, Address, and Telephone of the Responsible Party

##### **Company**

AFCO

800 Development Avenue

Chambersburg, PA 17201

T: 800-345-1329

[www.afcocare.com](http://www.afcocare.com)

#### Emergency Telephone Number

**Emergency number** : 1-800-424-9300 (CHEMTREC)

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### **Classification (GHS-US)**

Met. Corr. 1 H290

Skin Corr. 1C H314

Eye Dam. 1 H318

#### Label Elements

##### **GHS-US Labeling**

**Hazard Pictograms (GHS-US)** :



GHS05

**Signal Word (GHS-US)**

: Danger.

**Hazard Statements (GHS-US)**

: H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

**Precautionary Statements (GHS-US)**

: P234 - Keep only in original container.

P260 - Do not breathe vapors, mist, spray.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - IF INHALED: Remove victim 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.

P310 - Immediately call a POISON CENTER or doctor/physician.

P321 - Specific treatment (see section 4).

P363 - Wash contaminated clothing before reuse.

P390 - Absorb spillage to prevent material damage.

P405 - Store locked up.

P406 - Store in corrosive resistant container with a resistant inner liner.

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P501 - Dispose of contents/container to local, regional, national, territorial, provincial, and international regulations

### Other Hazards

**Other Hazards:** Contact with some metals may evolve flammable hydrogen gas.

**Unknown Acute Toxicity (GHS-US):** Not available.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Substances

#### Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	50-60	Not classified
Citric acid	(CAS No) 77-92-9	50-60	Eye Irrit 2A, H319

Full text of H-phrases: see section 16.

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 30 minutes. Obtain medical attention if irritation persists. Wash contaminated clothing before reuse.

**Eye Contact:** Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Causes severe skin burns and serious eye damage. Corrosive to eyes and skin.

**Inhalation:** Not usually a source of exposure.

**Skin Contact:** Causes severe skin burns.

**Eye Contact:** Causes serious eye damage.

**Ingestion:** Ingestion is likely to be harmful or have adverse effects. Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Chronic Symptoms:** None expected under normal conditions of use.

### Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. A heavy water stream may spread burning liquid.

### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Thermal decomposition generates: carbon oxides (CO, CO<sub>2</sub>). Reacts violently with strong bases. May generate explosive hydrogen gas when in contact with soft metals.

### Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Do not breath fumes from fires or vapors from decomposition. Stop leak if safe to do so. Do not allow runoff from fire fighting to enter drains or water sources.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products** Carbon oxides (CO, CO<sub>2</sub>).

### Reference to Other Sections

Refer to section 9 for flammability properties.

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Do not allow product to spread into the environment. Do not get in eyes, on skin, or on clothing

#### For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### For Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel. Stop leak if safe to do so. Ventilate area.

#### Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to environment.

#### Methods and Material for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely. Cautiously neutralize spilled product with soda ash or lime. Absorb and/or contain spill with inert material, then place in suitable container. Ventilate area. Contact competent authorities after a spill.

#### Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

### SECTION 7: HANDLING AND STORAGE

#### Precautions for Safe Handling

**Additional Hazards When Processed:** Contact with some metals may evolve flammable hydrogen gas.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

#### Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep away from incompatible materials.

**Incompatible Materials:** Strong bases. Strong oxidizers.

**Specific End Use(s):** Citric acid for use in food processing & in cleaning food processing equipment. For professional use only.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control Parameters

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

#### Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. . Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Safety glasses. Gloves. Protective goggles. Corrosion-proof clothing.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical goggles or safety glasses. Chemical goggles or face shield.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** None usually needed.

**Consumer Exposure Controls:** Do not eat, drink, or smoke during use.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### Information on Basic Physical and Chemical Properties

**Physical State** : Liquid

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<b>Appearance</b>	: Clear, colorless
<b>Odor</b>	: Low
<b>Odor Threshold</b>	: Not available
<b>pH</b>	: 1.0
<b>Relative Evaporation Rate (butylacetate=1)</b>	: Not available
<b>Melting Point</b>	: Not available
<b>Freezing Point</b>	: Not available
<b>Boiling Point</b>	: 97.8°C (208.04°F)
<b>Flash Point</b>	: Not flammable
<b>Auto-ignition Temperature</b>	: Not available
<b>Decomposition Temperature</b>	: Not available
<b>Flammability (solid, gas)</b>	: Not flammable
<b>Lower Flammable Limit</b>	: Not available
<b>Upper Flammable Limit</b>	: Not available
<b>Vapor Pressure</b>	: Not available
<b>Relative Vapor Density at 20°C</b>	: Not available
<b>Specific Gravity</b>	: 1.24
<b>Solubility</b>	: Complete in water
<b>Partition coefficient: n-octanol/water</b>	: Not available
<b>Viscosity</b>	: Not available
<b>Explosion Data – Sensitivity to Mechanical Impact</b>	: Not expected to present an explosion hazard due to mechanical impact
<b>Explosion Data – Sensitivity to Static Discharge</b>	: Not expected to present an explosion hazard due to static discharge

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Thermal decomposition generates: carbon oxides (CO, CO<sub>2</sub>). Contact with some metals may generate explosive hydrogen gas.

**Chemical Stability:** Stable under normal conditions.

**Possibility of Hazardous Reactions:** Hazardous reactions will not occur under normal conditions.

**Conditions to Avoid:** Incompatible materials.

**Incompatible Materials:** Strong bases. Strong oxidizers.

**Hazardous Decomposition Products:** Thermal decomposition generates: Carbon oxides (CO, CO<sub>2</sub>).

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified.

**LD50 and LC50 Data:** Not available.

**Skin Corrosion/Irritation:** Causes severe skin burns. (pH: 1.0)

**Serious Eye Damage/Irritation:** Causes serious eye damage. (pH: 1.0)

**Respiratory or Skin Sensitization:** Not classified.

**Germ Cell Mutagenicity:** Not classified.

**Teratogenicity:** Not available.

**Carcinogenicity:** Not classified.

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified.

**Reproductive Toxicity:** Not classified.

**Specific Target Organ Toxicity (Single Exposure):** Not classified.

**Aspiration Hazard:** Not classified.

**Symptoms/Injuries After Inhalation:** Not classified.

**Symptoms/Injuries After Skin Contact:** Causes severe skin burns.

**Symptoms/Injuries After Eye Contact:** Causes serious eye damage.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

### Information on Toxicological Effects - Ingredient(s)

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### LD50 and LC50 Data:

<b>Water (7732-18-5)</b>	
LD50 Oral Rat	>90000 mg/kg
<b>Citric acid (77-92-9)</b>	
LD50 Oral Rat	5400 mg/kg
LD50 Dermal Rat	>2000 mg/kg

## SECTION 12: ECOLOGICAL INFORMATION

**Toxicity** Not classified.

<b>Citric acid (77-92-9)</b>	
LC50 Fish 1	440 mg/l (Exposure time: 48 h)
EC50 Daphnia 1	1535mg/l (Exposure time: 24 h - Species: Daphnia magna)

### Persistence and Degradability

<b>Food Grade Citric Acid 50% (AFCO 0236)</b>	
Persistence and Degradability	Not established.

### Bioaccumulative Potential

<b>Food Grade Citric Acid 50% (AFCO 0236)</b>	
Bioaccumulative Potential	Not established.

**Mobility in Soil** Not available.

### Other Adverse Effects

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Sewage Disposal Recommendations:** Do not empty into drains; dispose of this material and its container in a safe way.

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations. RCRA Waste Code: D002 (Corrosive Material).

## SECTION 14: TRANSPORT INFORMATION

### 14.1 In Accordance with DOT

**Proper Shipping Name** : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CITRIC ACID)  
**Hazard Class** : 8  
**Identification Number** : UN3265  
**Label Codes** : 8  
**Packing Group** : III  
**ERG Number** : 153



### 14.2 In Accordance with IMDG

**Proper Shipping Name** : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CITRIC ACID))  
**Hazard Class** : 8  
**Identification Number** : UN3265  
**Packing Group** : III  
**Label Codes** : 8  
**EmS-No. (Fire)** : F-A  
**EmS-No. (Spillage)** : S-B  
**MFAG Number** : 153



### 14.3 In Accordance with IATA

**Proper Shipping Name** : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CITRIC ACID)  
**Packing Group** : III  
**Identification Number** : UN 3265  
**Hazard Class** : 8  
**Label Codes** : 8  
**ERG Code (IATA)** : 8L



### 14.4 In Accordance with TDG

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**Proper Shipping Name** : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. CITRIC ACID)  
**Packing Group** : II  
**Hazard Class** : 8  
**Identification Number** : UN3265  
**Label Codes** : 8



## SECTION 15: REGULATORY INFORMATION

### US Federal Regulations

<b>Food Grade Citric Acid 50% (AFCO 0236)</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard.
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
<b>Citric acid (77-92-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	

### US State Regulations

None.

### Canadian Regulations

<b>Water (7732-18-5)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
<b>Citric acid (77-92-9)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	

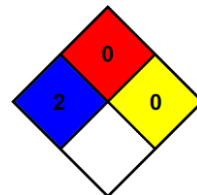
## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision date** : 03/03/2023  
**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full Text Phrases:

Eye Dam. 1	Serious eye damage/eye irritation Category 1.
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A.
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1C	Skin corrosion/irritation Category 1C
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

**NFPA Health Hazard** : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.  
**NFPA Fire Hazard** : 0 - Materials that will not burn.  
**NFPA Reactivity** : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



### HMIS III Rating

**Health** : 2 Moderate Hazard - Temporary or minor injury may occur.  
**Flammability** : 0 - Minimal Hazard.  
**Physical** : 0 - Minimal Hazard.

## Party Responsible for the Preparation of This Document

AFCO  
800 Development Avenue  
Chambersburg, PA 17201  
T: 800-345-1329

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

North America GHS SDS 2015 (U.S., Can., Mex.)