

## Section 1: Product and Company Identification

## 1.1 GHS Product Identifier

Product Name: Citric Acid 50% Solution

## 1.2 Other Means of Identification

SDS Code: 600134

Synonyms: 2-hydroxy-1,2,3-propanetricarboxylic acid / 2-hydroxypropane-1,2,3-tricarboxylic acid

CAS Number: 77-92-9

EC Number: 201-069-1

Reach Registration Number:

Index Number:

Molecular Formula:  $C_6H_8O_7$

Molecular Weight: 192.12 g/mol

## 1.3 Recommended / Restricted Use

Identified Uses: Paint Thinner

Restrictions: Processes involving incompatible materials. Processes that could lead to over-exposure of personnel.

## 1.4 Supplier Detail

Supplier: Deep South Chemical, Inc.  
229 Millstone Road  
Broussard, LA 70518  
USA  
337-837-9931 (Telephone)  
337-837-9565 (FAX)

## 1.5 Emergency Phone Number

Phone Number: Chemtrec 1-800-424-9300

## Section 2: Hazard Identification

## 2.1 GHS Classification

Acute Toxicity, Dermal (Category 5)

Skin Corrosion / Irritation (Category 3)

Serious Eye Damage / Eye Irritation (Category 2A)

## 2.2 GHS Label Elements, Including Precautionary Statements

## Pictogram(s)



## Signal Word

Warning

## Hazard Statement(s)

H313

May be harmful in contact with skin.

H316

Causes mild skin irritation.

H319

Causes serious eye irritation.

## 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

P312

Call a POISON CENTER / physician if you feel unwell.

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.

P337 + P313

If eye irritation persists: Get medical advice / attention.

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## Section 2: Hazard Identification - continued

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**Precautionary Statement(s) – Storage**

**Precautionary Statement(S) – Disposal**

### 2.3 Other Hazards

No data available.

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## Section 3: Composition / Information on Ingredients

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### 3.1 Substances / Mixtures

Components	Concentration
Citric Acid (77-92-9)	50.00%

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## Section 4: First Aid Measures

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### 4.1 Description of First Aid Measures

#### Eye Contact

Immediately flush eyes with water, while lifting the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek prompt medical attention.

#### Skin Contact

Remove contaminated clothing and shoes. Immediately flush skin with plenty of water for at least 15 minutes. Seek medical attention. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

#### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Seek medical attention. If unconscious, place in recovery position and seek medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.

#### Ingestion

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs spontaneously, keep head low so that stomach content does not get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Seek medical attention.

### 4.2 Most Important Symptoms / Effects – Acute & Delayed

#### Acute

Eye Contact: This solution may cause severe irritation to the eyes, with symptoms that include redness, tearing, and pain. Concentrated solutions may be corrosive to the eyes and cause corneal ulcerations.

Skin Contact: This product may cause moderate irritation of the skin. Citric Acid may cause allergic contact dermatitis with prolonged or repeated contact in sensitive individuals.

Inhalation: Aerosols and mists from solutions may cause mild to moderate irritation of the nose and throat. Overexposure could cause coughing, sneezing, and labored breathing.

Ingestion: Citric Acid may cause mild gastrointestinal irritation, with symptoms including nausea, diarrhea, vomiting, and abdominal pain. Concentrated solutions may cause necrotic and ulcerative lesions on oral mucous membranes. Chronic ingestion of high concentration Citric Acid can result in erosion of tooth enamel. Repeated ingestion of this solution can result in sensitization to the sun, causing sunburn.

#### Delayed

Chronic, high concentration overexposure to Citric Acid can result in a reduction of plasma calcium concentration, which can lead to cardiac arrhythmias, reduced cardiac output and, in severe cases, death.

### 4.3 Indication of Immediate Medical Attention / Special Treatment

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Keep victim under observation.

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## Section 5: Firefighting Measures

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### 5.1 Suitable Extinguishing Media

Use fire-extinguishing media appropriate for surrounding materials.

### 5.2 Unsuitable Extinguishing Media

No data available.

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## Section 5: Firefighting Measures - continued

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### 5.3 Specific Hazards Arising from the Chemical

Not considered to be a fire hazard.

### 5.4 Special Protective Actions for Firefighters

For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant.

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill / release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely.

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## Section 6: Accidental Release Measures

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

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

### 6.2 Environmental Precautions

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways. Notify relevant authorities in accordance with all applicable regulations.

### 6.3 Methods and Materials for Containment and Cleaning Up

Stop spill / release if it can be done safely. Move undamaged containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material (e.g. sand, earth, vermiculite or diatomaceous earth) and place in a suitable container for disposal according to local / state / federal / national regulations. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

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## Section 7: Handling and Storage

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### 7.1 Precautions for Safe Handling

Put on appropriate personal protective equipment. Avoid contact with eyes, skin and clothing. Avoid breathing vapor, mist or dust. Do not ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

### 7.2 Conditions for Safe Storage, Including any Incompatibilities

Store in accordance with local regulations. Store this material in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials, and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Protect container(s) against physical damage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

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## Section 8: Exposure Controls / Personal Protection

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### 8.1 Control Parameters

#### Components with Workplace Control Parameters

Components	CAS No.	Value	Control Parameters	Basis
Citric Acid	77-92-9			Contains no substances with occupational exposure limit values.

### 8.2 Appropriate Engineering Controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye wash facilities and emergency shower must be available when handling this product.

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**8.3 Individual Protection Measures, Such as Personal Protective Equipment (PPE)****Eye/Face Protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and / or full face shield.

**Hand Protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufactures. In the case of mixtures, consisting of multiple substances, the protection time of the gloves cannot be accurately estimated.

**Skin Protection**

Personal protective equipment for the body, appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory Protection**

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Thermal Hazards**

No data available.

**Section 9: Physical and Chemical Properties****9.1 Physical and Chemical Data**

Physical State	Liquid
Color	Colorless
Odor	Odorless
Odor Threshold	N/D
pH	2.2 (0.1 N Solution)
Specific Gravity (Water = 1)	1.2480 @ 25° C (77° F)
Melting Point / Freezing Point	0° C (32° F)
Initial Boiling Point / Range	104° C (219° F)
Flash Point	N/A
Evaporation Rate (BuA = 1)	Same as Water
Flammability (solid, gas)	N/A
Lower Explosion Limit	N/D
Upper Explosion Limit	N/D
Vapor Pressure	Same as Water
Vapor Density (Air = 1)	N/D
Relative Density	N/D
Water Solubility	Completely Soluble
Partition Coefficient	N/D
n-octanol / water	
Auto-Ignition Temperature	N/D
Decomposition Temperature	N/D
Viscosity	7.0 Centipoises @ 25° C (77° F)

**Section 10: Stability and Reactivity****10.1 Reactivity**

No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical Stability**

This material is stable under normal conditions.

**10.3 Possibility of Hazardous Reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

#### 10.4 Conditions to Avoid

Avoid contact with incompatible materials.

#### 10.5 Incompatible Materials

This product is incompatible with metal nitrates, alkali carbonates, alkali bicarbonates and potassium tartrate. This product will corrode copper, zinc, aluminum and their alloys.

#### 10.6 Hazardous Decomposition Products

Under fire conditions, the material decomposes to give off oxides of carbon.

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### Section 11: Toxicological Information

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#### 11.1 Information on Toxicological Effects

##### Acute Toxicity

LD<sub>50</sub> Oral: Rat = 3 mg/kg

LD<sub>50</sub> Dermal: Rabbit = 500 mg/kg (24 Hrs.)

##### Skin Corrosion / Irritation

Causes skin irritation.

##### Serious Eye Damage / Eye Irritation

Causes eye irritation.

##### Respiratory or Skin Sensitization

Not a skin sensitizer.

##### Germ Cell Mutagenicity

No mutagenic components identified.

##### Carcinogenicity

None of the components in this product at concentrations greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

##### Reproductive Toxicity

No components toxic to reproduction.

##### Specific Target Organ Toxicity – Single Exposure

No data available.

##### Specific Target Organ Toxicity – Repeated Exposure

No data available.

##### Aspiration Hazard

No data available.

#### 11.2 Information on the Likely Routes of Exposure

<b>Inhalation</b>	Causes irritation to the respiratory tract.
<b>Ingestion</b>	Causes irritation to the gastrointestinal tract.
<b>Skin</b>	Causes mild skin irritation.
<b>Eyes</b>	Causes serious eye irritation.

#### 11.3 Symptoms Related to the Physical, Chemical and Toxicological Characteristics

Eye Contact: May be abrasive.

Skin Contact: Symptoms include redness, itching and pain.

Inhalation: Symptoms include coughing and shortness of breath.

Ingestion: Symptoms include nausea, vomiting and diarrhea.

#### 11.4 Delayed and Immediate Effects / Chronic Effects from Short Term and Long Term Exposure

##### Delayed

Chronic or heavy ingestion may cause tooth enamel erosion.

#### 11.5 Numerical Measures of Toxicity

No data available.

#### 11.6 Interactive Effects

No data available.

#### 11.7 Other Information

No data available.

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## Section 12: Ecological Information

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### 12.1 Toxicity

LC<sub>50</sub>: *Leuciscus idus melanotus* (Golden Orfe Fish) = 440 mg/L (48 Hrs.) (OECD 203)

EC<sub>50</sub>: *Daphnia magna* (Water Flea) = 1535 mg/L (24 Hrs.)

### 12.2 Persistence and Degradability

This material is expected to biodegrade.

### 12.3 Bioaccumulative Potential

No data available.

### 12.4 Mobility in Soil

No data available.

### 12.5 PBT and vPvB Assessment

No data available.

### 12.6 Other Adverse Effects

No data available.

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## Section 13: Disposal Considerations

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### 13.1 Disposal Methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

### 13.2 Contaminated Packaging

Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

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## Section 14: Transport Information

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### 14.1 DOT (US)

Not regulated.

### 14.2 IMDG

Not regulated.

### 14.3 IATA

Not regulated.

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## Section 15: Regulatory Information

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### 15.1 Safety, Health and Environmental Regulations Specific for the Product

#### OSHA Hazard Communication Standard (29 CFR 1910.1200)

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard.

#### Toxic Substances Control Act (TSCA)

All components are listed or exempted.

#### SARA – Section 311 / 312 Hazard Categories

Acute Health Hazard

#### SARA – Section 313 Components

This product does not contain any toxic chemical(s) subject to the reporting requirements of Section 313 and 40 CFR 372.

#### SARA – Section 302 Extremely Hazardous Substance

This product does not contain any chemical(s) subject to the reporting requirements of Section 302 and 40 CFR 372.

#### SARA – Section 304 Emergency Planning & Notification

This product does not contain any chemical(s) subject to the reporting requirements of Section 304 and 40 CFR 372

#### Clean Water Act (CWA)

This product contains no chemical(s) regulated as a Hazardous Substance, Priority Pollutant or Toxic Pollutant pursuant to the Clean Water Act.

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**Clean Air Act (CAA)**

This product contains no chemical(s) regulated as a Hazardous Air Pollutant (HAP), Class 1 Ozone Depletor or Class 2 Ozone Depletor pursuant to the Clean Air Act.

**California Proposition 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

This product does not contain any chemical(s) which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

**Other U.S. State Inventories**

No data available.

**15.2 International Regulations**

**Australia Inventory of Chemical Substances (AICS)**

All components are listed or exempted.

**Canada Domestic Substance List (DSL)**

All components are listed or exempted.

**China Existing Chemical Inventory (IECSC)**

No data available.

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

No data available.

**Japanese Existing and New Chemical Substances Inventory (ENCS)**

All components are listed or exempted.

**Korea Toxic Chemical Control Law (KECI) or Existing Chemicals List (ECL)**

All components are listed or exempted.

**Philippine Inventory of Chemicals and Chemical Substances (PICCS)**

All components are listed or exempted.

**New Zealand Inventory of Chemicals (NZIoC)**

No data available.

**Taiwan Inventory of Chemicals (CSNN)**

No data available.

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Section 16: Other Information

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**16.1 HMIS Classification**

Health:	2
Flammability:	0
Physical Hazard:	0
Personal Protection:	~

**16.2 NFPA Rating**

Health Hazard:	2
Flammability:	0
Instability:	0
Special Hazards:	~

**16.3 Prepared By**

Deep South Chemical, Inc.  
Operations, Safety & Compliance  
info@deep-south-chemical.com  
337-837-9931

**16.4 Date of Preparation of Latest Version**

June 1, 2015

**16.5 Further Information**

The information and recommendations in this document are, to the best of our knowledge and belief, accurate as of the date of publication. However, none of this information and recommendations should be construed as a warranty, express or otherwise.

It is the responsibility of the user to determine the applicability of such information and recommendations and the suitability of the product for its own particular purpose.

This product may present hazards and should be used with caution. While certain hazards are described in this document, no guarantee is made that these are the only hazards that exist.

See the additional page of the bill of lading for additional terms and conditions of sale.