

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

|              |                                           |
|--------------|-------------------------------------------|
| Product name | Citric Acid, Anhydrous                    |
| CAS number   | 77-92-9                                   |
| Synonyms     | 2-hydroxy-1,2,3-propanetricarboxylic acid |

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

|                 |                      |
|-----------------|----------------------|
| Identified uses | Laboratory Chemicals |
|-----------------|----------------------|

#### 1.3 Details of the supplier of the safety data sheet

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| Company   | Lab Alley, LLC<br>12501 Pauls Valley Road<br>Austin, Texas 78737<br>U.S.A. |
| Telephone | 512-668-9918                                                               |
| Fax       | 512-886-4008                                                               |

#### 1.4 Emergency telephone

|                   |                              |          |
|-------------------|------------------------------|----------|
| Emergency Phone # | US & Canada: 1-800-535-5053  | INFOTRAC |
|                   | International 1-352-323-3500 | INFOTRAC |

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

|                                                  |             |
|--------------------------------------------------|-------------|
| Eye Irritation                                   | Category 2A |
| Specific Target Organ Toxicity (single exposure) | Category 3  |
| Target Organ(s) - Respiratory system             |             |
| Combustible Dust                                 | Yes         |

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

Causes serious eye irritation.

Precautionary statements

Prevention: Wash skin thoroughly after handling. Wear eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

| Chemical name                        | Common name and synonyms | CAS number | Concentration |
|--------------------------------------|--------------------------|------------|---------------|
| 2-hydroxy-1,2,3 propanetricarboxylic | Citric acid              | 77-92-9    | <=100%        |

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

##### If inhaled

If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

##### In case of skin contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. If irritation develops, call a physician.

##### In case of eye contact

Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, call a physician.

##### If swallowed

Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

No information available.

#### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

##### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

#### 5.2 Specific hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

#### 5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 5.4 Further information

##### Flash Point

345°C / 653°F

##### Autoignition Temperature

1000 °C / 1832 °F

##### Explosion limits

###### Upper

No data available.

###### Lower

No data available.

##### Sensitivity to Mechanical Impact

No information available.

##### Sensitivity to Static Discharge

No information available.

##### NFPA

| Health | Flammability | Instability | Physical hazards |
|--------|--------------|-------------|------------------|
| 2      | 1            | 0           | N/A              |

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

## **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so.

## **6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

## **6.4 Reference to other sections**

See Section 2 for full list of hazard and precaution statements.

# **SECTION 7: Handling and storage**

## **7.1 Precautions for safe handling**

### **Precautions on safe handling**

Do not breathe vapors/dust. Avoid contact with skin and eyes. Smoking, eating, and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice.

## **7.2 Conditions for safe storage, including any incompatibilities**

### **Storage conditions**

Keep containers tightly closed in a dry, cool, and well-ventilated place. Electrical installations/working materials must comply with the technological safety standards.

### **Incompatibilities**

Metals, nitrites, oxidizing agents, reducing agents, strong bases.

# **SECTION 8: Exposure controls/personal protection**

## **8.1 Occupational exposure limits**

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

## **8.2 Exposure controls**

### **Appropriate engineering controls**

Good general ventilation 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. Provide eyewash station and safety shower.

## **Personal protective equipment**

### **Eye/face protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tightly fitting safety goggles. Eye wash bottle with pure water.

### **Skin protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

### **Body Protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

### **Respiratory protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so.

## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

|                                 |                          |
|---------------------------------|--------------------------|
| Physical State                  | Solid                    |
| Appearance                      | White                    |
| Odor                            | Odorless                 |
| Odor Threshold                  | No information available |
| pH                              | 1.7 (10%)                |
| Melting Point/Range             | 153 °C / 307.4 °F        |
| Boiling Point/Range             | No information available |
| Evaporation Rate                | No information available |
| Flammability (solid)            | Not applicable           |
| Flammability or explosive limit | No data available        |
| Upper                           | No data available        |
| Lower                           | No data available        |
| Vapor Pressure                  | No information available |

|                                           |                          |
|-------------------------------------------|--------------------------|
| Vapor Density                             | No information available |
| Density                                   | No information available |
| Solubility                                | Soluble in water         |
| Partition coefficient;<br>n-octanol/water | No data available        |
| Autoignition Temp                         | 1000 °C / 1832 °F        |
| Decomposition Temp                        | No information available |
| Viscosity                                 | No information available |
| Molecular Formula                         | C6H8O7                   |
| Molecular Weight                          | 192.13 g/mol             |
| VOC Content(%)                            | No information available |
| Oxidizing properties                      | Not oxidizing            |

## 9.2 Other safety information

None.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

No decomposition if stored and used as directed.

### 10.4 Conditions to avoid

Keep away from heat, flame, spark and other ignition sources. Keep away from incompatible materials.

### 10.5 Incompatible materials

Metals, nitrites, oxidizing agents, reducing agents, strong bases.

### 10.6 Hazardous decomposition products

Carbon dioxide and Carbon monoxide.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information, Component Information

#### Acute toxicity

| Component   | LD50 Oral    | LD50 Dermal   | LC50 Inhalation |
|-------------|--------------|---------------|-----------------|
| Citric acid | 3 g/kg (Rat) | >2 g/kg (Rat) | -               |

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/eye irritation**

Serious eye damage/eye irritation.

**Respiratory or skin sensitization**

Not classified.

**Germ cell mutagenicity**

Not classified.

**Carcinogenicity**

| Component   | CAS     | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------|---------|------------|------------|------------|------------|------------|
| Citric acid | 77-92-9 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Specific target organ toxicity - single exposure**

None known.

**Specific target organ toxicity - repeated exposure**

None known.

**Reproductive toxicity**

Not classified.

**Chronic effects**

No information available.

**11.2 Additional Information**

No information available.

**SECTION 12: Ecological information****12.1 Toxicity**

| Product     |      | Species                    | Test Results     |
|-------------|------|----------------------------|------------------|
| Citric Acid | LC50 | Leuciscus idus             | 440-760 mg/L/96h |
|             | EC50 | Photobacterium phosphoreum | 14 mg/L/15 min   |
|             | EC50 | Water Flea                 | 120 mg/L/72h     |

**12.2 Persistence and degradability**

Persistence is unlikely.

**12.3 Bio accumulative potential**

No information available.

#### 12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

#### 12.5 Results of PBT and vPvB assessment

No information available.

#### 12.6 Endocrine disrupting properties

No information available.

#### 12.7 Other adverse effects

No information available.

### SECTION 13: Disposal considerations

#### 13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### SECTION 14: Transport information

**DOT (US)** Not regulated.

**IMDG** Not regulated.

**IATA** Not regulated.

### SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
Not applicable.

**CERCLA Hazardous Substance List (40 CFR 302.4)**  
Not listed.

**SARA 304 Emergency release notification**  
Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**  
Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous**

See Section 2 for more information.

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

Not regulated.

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Not listed.

**US state regulations**

**US. Massachusetts RTK - Substance List**

Not listed.

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**California Proposition 65**

Not listed.

**SECTION 16: Other information**

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**SECTION 17: Disclaimer**

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.