Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Name: Citric Acid
   Product Code: 502-230X

1.2 Intended Use: Compound used in customer substance/mixture/product.

1.3 Supplier: Majestic Mountain Sage Inc
   2490 S 1350 W
   Nibley, UT 84321 - United States of America
   T 435.755.0863 - F 435.755.2108
   www.TheSage.com

1.4 Emergency Telephone Number
   No additional information available

SECTION 2: Hazards Identification

2.1 Classification

   OSHA Hazards: Irritant

   GHS Classification:
   - Acute Toxicity, Dermal (Category 5)
   - Skin Irritation (Category 3)
   - Eye Irritation (Category 2A)

2.2 GHS Label Elements, Including Precautionary Statements

   Hazard Pictograms

   [Diagram of a hazard symbol]

   Signal Word: Warning
Hazard Statements
H313 May be harmful in contact with skin.
H316 Causes mild skin irritation.
H319 Causes serious eye irritation.

Precautionary Statements
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing.

2.3 HMIS Classification

| Health Hazard: | 2 |
| Flammability: | 0 |
| Physical Hazards: | 0 |

2.4 NFPA Rating

| Health Hazard: | 2 |
| Fire: | 0 |
| Reactivity Hazard: | 0 |

2.5 Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.
Ingestion: May be harmful if swallowed.

SECTION 3: Composition/Information on Ingredients

3.1 Substance

Synonyms: 2-Hydroxy-1,2,3-propanetricarboxylic acid
Formula: C_6H_8O_7
Molecular Weight: 192.12 g/mol.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>EC No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid</td>
<td>77-92-9</td>
<td>201-069-1</td>
</tr>
</tbody>
</table>

SDS Citric Acid, 502-230X August 14, 2013, page 2 of 8
SECTION 4: First Aid Measures

4.1 Description of First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Consult a physician.

Skin Contact: Remove contaminated clothes. Wash affected skin with water and soap, do not use any solvents. Consult a physician.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms: No information available

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians: Treat symptomatically.

SECTION 5: Firefighting Measures

5.1 Extinguishing Media

Suitable: Water spray, dry chemical, alcohol foam, or carbon dioxide.

Unsuitable: No information available.

5.2 Specific Hazards Arising From the Chemical

Auto-ignition Temperature: 1011°C (1852°F) or by contact with an ignition source.
Explosion Hazards: Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

5.3 Protective Equipment and Precautions for Firefighters
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and material for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and Storage

7.1 Precautions for Safe Handling
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibilities such as oxidizing agents, reducing agents, metals, and alkalis.

7.2 Conditions for Safe Storage, Including Any Incompatibilities
Keep container tightly closed. Keep container is a cool, well-ventilated area.

SECTION 8: Exposure Controls/Personal Protection

8.1 Engineering Measures
Ensure adequate ventilation, especially in confined areas.
8.3 Individual Protection Measures, Such as Personal Protective Equipment

**Eye/Face Protection:** Wear safety glasses with side shields (or goggles).

**Skin/Body Protection:** Wear protective gloves (neoprene, nitrile or butyl rubber) and protective clothing.

**Respiratory Protection:** In case of open handling of larger quantities or accidental release, particle mask or respirator with independent air supply.

### SECTION 9: Physical and Chemical Properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder, difference granular size</td>
</tr>
<tr>
<td>Appearance</td>
<td>White granules</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless, with a strong acidic taste</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH (20°C)</td>
<td>2.2 (10 g/l aqueous solution)</td>
</tr>
<tr>
<td>Melting/Freezing Point</td>
<td>152-154°C</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Density</td>
<td>1.665 g/cm³ (20°C)</td>
</tr>
<tr>
<td>Solubility</td>
<td>~750,000 mg/l, water soluble, ethanol badly soluble, diethyl ether insoluble, benzene insoluble</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>log Pow -1.72 (octanol/water)</td>
</tr>
<tr>
<td>Ignition Point (liquid)</td>
<td>500°C</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Oxidizing Properties: No information available

9.2 Other Information
- Softening Point: No information available
- Molecular Weight: No information available
- VOC Content (%): No information available
- Density: No information available
- Bulk Density: ~725 kg/m³
- Volatility: No information available

10.1 Reactivity
No information available.

10.2 Chemical Stability
No information available.

10.3 Possibility of Hazardous Reactions
No information available.

10.4 Conditions to Avoid
Humidity, temperature above 40°C.

10.5 Incompatible Materials
Potassium tartrate, alkalies, alkaline earth carbonates and bicarbonates, metal nitrates, acetates, sulfides.

10.6 Hazardous Decomposition Products
No information available.

10.7 Additional Information
Slight hygroscopic.

11.1 Information on Toxicological Effects
- Acute Toxicity: LD₅₀ 5,400 mg/kg (oral, mouse)
  LD₅₀ >7,000 mg/kg (oral, rabbit)
  LD₅₀ >6,730 mg/kg (oral, rabbit)
- Sub Acute Toxicity: NOEL 4,000 mg/kg/d (oral, rat; 90 days)
Local Effects: Eye; strongly irritating (rabbit)
Skin; moderately irritating (rabbit)

Chronic Toxicity: Well tolerate 2,000 m/kg/d (oral, rat; 90 days)

Mutagenicity: Not mutagenic

Carcinogenicity: Not carcinogenic (rat, mouse)

Reproduction Toxicity: Not teratogenic

Note: Intermediate product of human metabolism (Citric acid Crystal)

SECTION 12: Ecological Information

12.1 Ecotoxicity
Moderately toxic for planktonic crustaceans (Daphnia magna); LC₅₀ 80 mg/l
Barely toxic for fish (goldfish); EC₅₀ 625 mg/l
Barely toxic for microorganisms (Pseudomonas Puttida); EC₅₀ (16 h) 485 mg/l
Barley toxic for protozoa (Entosiphon sulcatum)
Moderately toxic for algae (Microcystic aeruginosa); EC₅₀ 640 mg/l

12.2 Persistence and Degradability
Well inherently biodegradable 98%, 7 days.

12.3 Bioaccumulation
No information available.

12.4 Air Pollution
Observe local/national regulation.

12.4 Other Adverse Effects
No information available.

SECTION 13: Disposal Considerations

13.1 Waste Treatment Methods

Disposal of Wastes: Hazardous waste. Dispose of in compliance with the laws and regulations pertaining to this product in your jurisdiction.

Contaminated Packaging: Empty containers should be taken for local recycling, recovery or waste disposal.
SECTION 14: Transport Information

14.1 Transportation
Not classified by transport regulations.

SECTION 15: Regulatory Information

15.1 U.S. Federal and State Regulations

**OSHA Hazards**  Irritant

**SARA 302 Components**
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
Acute health hazard.

**California Proposition 65 Components**
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other Information

Notes:
This safety data sheet is based on the properties of the material known at the time the data sheet was issued. The safety data sheet is intended to provide information for a health and safety assessment of the material and the circumstances, under which it is packaged, stored or applied in the workplace. For such a safety assessment holds no responsibility. This document is not intended for quality assurance purposes.