MATERIAL SAFETY DATA SHEET

CITRIC ACID, ANHYDROUS

1. PRODUCT NAME AND COMPANY IDENTIFICATION

Product Name: CITRIC ACID, ANHYDROUS
Product Use: Personal Care Formulations
Company Name: Natural Sourcing
Company Address: 341 Christian Street, Oxford, CT 06478, USA
Date Issued: 8/19/2008
Emergency Telephone Number: Chemtrec Tel: (800) 262-8200

2. COMPOSITION/INGREDIENT INFORMATION

Chemical Family: Organic Acid
Chemical Name: 2-Hydroxy-1, 2, 3 Propanetricarboxylic Acid
Chemical Formula: C₆H₈O₇
Molecular Weight: 192.13
CAS #: 77-92-9
Hazardous Components: 2-Hydroxy-1, 2, 3 Propanetricarboxylic Acid
Respirable Dust: OSHA PEL: 5.000 mg/M³ 100%
Respirable Dust: ACGIH TLV: 5.000 mg/M³

3. HAZARDS IDENTIFICATION

Primary Routes of Entry: Inhalation Skin Eyes
Eye Contact: Dust is irritating to eyes resulting in stinging, reddening, tearing and swelling.
Skin Contact: Product is irritating to the skin resulting in reddening, stinging, and swelling.
Ingestion: No information
Inhalation: Dust may be irritating to nose, lungs and respiratory system

4. FIRST AID MEASURES

Eyes: Flush with plenty of water or eye wash solution for 15 minutes. Seek medical attention immediately.
Skin: Remove contaminated clothing and wash before reuse. Wash skin with soap and water and rinse with plain water for 15 minutes.
Ingestion: If swallowed, call a physician.
Inhalation: Remove to fresh air. Give artificial respiration if not breathing. Give oxygen and seek medical attention if breathing becomes difficult.

Medical Conditions Generally Aggravated by Exposure: Persons with pre-existing eye or skin disorders may be more susceptible to the effects of the products.

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5. FIRE FIGHTING MEASURES

Flash Point (Method Used): N/A
Flammable Limits
LEL: N/A
UEL: N/A
Hazardous Combustion Products: None
Extinguishing Media:
• Dry Chemical
• Carbon Dioxide
• Water
Special Firefighting Procedures: Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.
Unusual Fire & Explosion Hazards: Product dust may form an explosive mixture with air. Avoid conditions which produce dust.

6. ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

Personal Protection: Wear chemical safety goggles, chemical resistant gloves, and protective clothing to prevent skin contact.
Environmental Protection: N/A
Methods for Cleaning Up: Vacuum up or sweep up and remove to disposal container. Cover with soda ash or sodium bicarbonate to neutralize. Mix and add water if necessary. Scoop up slurry and dispose in accordance with existing federal, state, and local environmental control regulations.

7. HANDLING AND STORAGE

Handling
Safe Handling:
• Wear safety glasses.
• Wear protective gloves and clothing to prevent skin contact.
• Avoid breathing dust.
• Keep away excessive heat

Storage
Requirements for Storage Areas and Containers:
• Store in a cool, dry location, in a well ventilated area. Product deteriorates above 405°F (207°C).
• Avoid air conveying of powdered product due to potential of static buildup. Keep containers sealed.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls: Provide mechanical exhaust, local ventilation, safety showers, eye wash stations. Educate employees in safe use and handling of this product.
Personal Protection
Eye: Chemical safety glasses should be worn.
Skin/Body: Lab coats and chemical resistant gloves should be worn.
Respiratory: Work ambient concentrations should be monitored and if the recommended exposure limit is exceeded, a NIOSH/MSHA approved dust respirator should be worn.
Ventilation: Use local ventilation if dusting is a problem to maintain air levels below the recommended exposure limit.
Other: Evaluate need based on application. Slip proof shoes may be
9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical State:** Crystals, free-flowing
- **Color:** White
- **Odor:** Odorless with strong acid taste
- **Solubility in Water:** 59.2 g/100 g @ 68°F
- **Solubility in Other:** Methyl Alcohol: 197g/100g @ 66.2°F
- **Specific Gravity:** Not Established

10. STABILITY AND REACTIVITY

- **Stability:** Stable
- **Conditions to Avoid:** Practices which produce dust
- **Incompatibility (Materials to Avoid):** Reaction with caustic can create heat (strong exotherm). Solutions are mildly corrosive to carbon steel.
- **Hazardous Decomposition or Byproducts:** In case of fire, oxides of carbon and other potentially toxic fumes.
- **Hazardous Polymerization:** Will Not Occur

11. TOXICOLOGICAL INFORMATION

- **Signs and Symptoms of Exposure:** Product is irritating to eyes, skin, and respiratory system resulting in reddening, stinging, tearing and swelling.
- **Toxicity Data:** Not Found
- **Medical Conditions Generally Aggravated by Exposure:** Persons with pre-existing eye or skin disorders may be more susceptible to the effects of the products.
- **Carcinogenicity:** The components of this product are not listed by NTP, IARC or regulated as a carcinogen by OSHA.
- **Chronic Effects of Exposure:** No applicable information was found concerning any adverse chronic health effects from overexposure to this product.

12. ECOLOGICAL INFORMATION

- **Ecological Information:** No information found

13. DISPOSAL CONSIDERATIONS

- **Waste Disposal Methods:** Dispose of according to local, state and federal regulations.

14. TRANSPORT INFORMATION

- **Technical Shipping Name:** Organic Acid
- **Freight Class Bulk:** Chemicals, NOI
- **Freight Class Package:** Chemicals, NOI (NMFC 80000)
- **Product Label:** Citric Acid, Anhydrous, FCC, USP
- **DOT Classification:** Not restricted
- **IMO/IMDG (Ocean):** Not regulated
- **ICAO/IATA (Air):** Not regulated
15. REGULATORY INFORMATION

OSHA Status: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200

TSCA Status: On TSCA inventory

CERCLA Reportable Quantity: Exempt from SARA Title III reporting; contains no section 313 toxic chemical. It may contain up to the FCC limits for arsenic (1 ppm), lead (0.5 ppm), and heavy metals (5 ppm, as lead).

SARA Reportable Quantity: Exempt from SARA Title III reporting; contains no section 313 toxic chemical. It may contain up to the FCC limits for arsenic (1 ppm), lead (0.5 ppm), and heavy metals (5 ppm, as lead).

RCRA Status: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

FDA Status: Citric acid meets the specifications given in the Fourth Edition of the Food Chemicals Codex and is in chemical compliance with 21 CFR 184:1033 as a Multiple Purpose Generally Recognized As Safe Food Substance.

Other Regulatory Information: The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Component Name/CAS #/Concentration: 2-Hydroxy-1, 2, 3 Propanetricarboxylic Acid/77-92-9 /100%

State Code:
PA3 = Pennsylvania Non-Hazardous present at 3% or greater
NJ4 = New Jersey Other – included in 5 predominant ingredients > 1%

HMIS Ratings:

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<th>Flammability</th>
<th>Reactivity</th>
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0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

16. ADDITIONAL INFORMATION

This information is provided for documentation purposes only.

The complete range of conditions or methods of use are beyond our control therefore we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate however, all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers.