



<b>MATERIAL SAFETY DATA SHEET</b>	
<b>PRODUCT NAME: CITRIC ACID CR20A</b>	

NFPA/HMIS: Health 1  
Flammability 0  
Reactivity 0

**MATERIAL SAFETY DATA SHEET**      **U.S. DEPARTMENT OF LABOR**  
COMPLIES WITH USDL SAFETY AND HEALTH REGULATIONS 29CFR1910.1200

### **SECTION 1: COMPANY AND PRODUCT IDENTIFICATION**

**PRODUCT NAME:** Citric Acid

**MANUFACTURER:**

Bridgepoint Systems  
4282 S 590 W  
Salt Lake City, UT 84123  
Telephone: 801-261-1282  
Prepared 4/1/08

**EMERGENCIES:** (800) 535-5053 (Infotrac)

**NFPA/HMIS RATINGS:** Health: 1, Flammability: 0, Reactivity: 0

### **SECTION 2: COMPOSITION/INFORMATION ON COMPONENTS**

<b>HAZARDOUS INGREDIENTS:</b>	<b>OSHA PEL</b>	<b>TLV</b>
Citric Acid (CAS #77-92-9)	N/E	N/E

### **SECTION 3: HAZARDS IDENTIFICATION**

#### **IMMEDIATE HEALTH EFFECTS**

**PRIMARY ROUTES OF ENTRY:** Eyes, skin contact/absorption, inhalation or ingestion.

**SIGNS/SYMPTOMS OF OVEREXPOSURE:** Irritation to the skin, eyes, nose, throat, and respiratory tract.

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**TARGET ORGAN EFFECTS:** Irritation of the skin and eyes. Irritation of lungs possible if powder is inhaled.

**REPRODUCTIVE/DEVELOPMENTAL INFORMATION:** No data available.

**CARCINOGENICITY:**

**NTP:** Known – No; **Anticipated – No** **OSHA:** No **IARC:** No

**LONG TERM EFFECTS:** No data available.

**SECTION 4: FIRST AID MEASURES**

**EYES:** Flush eyes with water for at least 15 minutes. If irritation persists, consult a physician.

**SKIN:** If irritation occurs, flush skin with water for at least 15 minutes. If irritation persists, consult a physician

**INHALATION:** If symptoms of overexposure develop, remove to fresh air. If symptoms persist, consult a physician.

**INGESTION:** Give 8 to 16 ounces of water to dilute substance. Do not induce vomiting. Consult a physician or local Poison Control Center. Never give anything by mouth to an unconscious person.

**SECTION 5: FIRE FIGHTING MEASURES**

**FLASHPOINT (° Fahrenheit):** Not available.

**EXPLOSIVE LIMITS:** No data available.

**AUTOIGNITION TEMPERATURE:** 345 deg C / 653 deg F

**HAZARDOUS PRODUCTS OF COMBUSTION:** Carbon oxides

**EXTINGUISHING MEDIA:** water, water spray, dry powder, foam, carbon dioxide (CO2).

**FIRE FIGHTING INSTRUCTIONS:** Standard procedure for chemical fires.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions:** Use personal protective equipment. Avoid contact with skin and eyes.

**Environmental precautions:** No special environmental precautions required.

**Methods for cleaning up:** Sweep up and shovel. After cleaning, flush away traces with water.

**SECTION 7: HANDLING AND STORAGE**

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**Handling**

Technical measures/Precautions:

Avoid dust formation.

Take precautionary measures against static discharges.

Safe handling advice: Use personal protective equipment.

**Storage**

Technical measures/Storage conditions: Keep tightly closed in a dry and cool place.

Incompatible products: Strong oxidizing agents, strong bases.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

Respiratory Protection...	Not usually needed.
Protective Clothing.....	Rubber gloves, Safety glasses and clothing that will minimize skin contact.
Ventilation.....	Normal room ventilation is usually sufficient.
Storage.....	Store in dry place away from excessive heat, in original container. Reseal container after use.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Odor :** mild acidic

**Physical State:** Powder, crystalline

**Appearance:** Clear, colorless

**pH :** 1.8 in 5% solution

**Bulk Density:** 1.665 g/cm<sup>3</sup>

**Boiling Point:** N/A

**Freezing/Melting Point:** N/E

**Vapor Pressure:** N/E

**Vapor Density:** N/E

**Solubility in Water:** Complete

**SECTION 10: STABILITY AND REACTIVITY**

**Stability:** Stable at normal conditions.

**Conditions to avoid:** Avoid dust formation.

Take precautionary measures against static discharges.

**Materials to avoid:** Incompatible with strong bases and oxidizing agents.

**Hazardous decomposition products:** No decomposition if stored normally. Thermal decomposition can lead to release of irritating gases and vapors.

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**Corrosion:** May corrode metals. 316 Stainless steel recommended material for handling.

**SECTION 11: TOXICOLOGICAL INFORMATION**

Acute toxicity      LD50/p.o./rat = 11.700 mg/kg (1)  
                         LD50/i.p./rat = 883 mg/kg (2)  
                         LD50/p.o./mouse = 5.040 mg/kg (1)  
                         LD50/i.v./mouse = 42 mg/kg (17)  
                         LD50/i.p./mouse = 961 mg/kg (2)

Local effects:

Irritating to eyes.

May cause skin irritation and respiratory tract irritation.

Chronic toxicity: None.

Human experience: Health injuries are not known or expected under normal use.

Carcinogenic Characteristic: This product does not contain any substances that are considered by ACGIH, OSHA or NTP to be "probable" or "suspected" human carcinogens.

Reproductive toxicity: No data available

Teratogenicity: No data available

Mutagenic Characteristic: negative)

**SECTION 12: ECOLOGICAL INFORMATION**

Mobility: completely soluble

Persistence / degradability

Chemical oxygen demand (COD) = 750 50 mg O<sub>2</sub> /g

Biochemical oxygen demand within

5 days (BOD<sub>5</sub>) = 625 50 mg O<sub>2</sub> /g

DIN 38412 Part 25 (DIN EN ISO 9888): Readily biodegradable (98 % after 2 days)\*

Ecological toxicity

DIN 38412 Part 15 (DIN EN ISO 7346) Toxicity to fish 440 - 706 mg/L

DIN 38412 Part 5 Toxicity to bacteria >10.000 mg/L

Bioaccumulation None.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

Do not dispose of on the land, in surface waters, or in storm drains. Small spills and waste may be flushed into a waste treatment sewer where local regulations permit. Larger quantities should be collected for reuse or consigned to a licensed hazardous waste hauler for disposal in accordance with federal, state and local regulations. **All disposal must be in accordance with all federal, state and local regulations.**

**SECTION 14: TRANSPORT INFORMATION**

No restrictions for Ground, Air, or Maritime Transportation in accordance with 49 CFR parts 100-185.

**SECTION 15: REGULATORY INFORMATION**

All components are listed on TSCA.

**16. OTHER INFORMATION**

This product has no established regulatory information. All regulatory information given is based on individual components of the mixture by component number. While this information and recommendations set forth herein are believed to be accurate and reliable, it is provided without warranty regarding its accuracy. BRIDGEPOINT SYSTEMS MAKES NO WARRANTY WITH RESPECT HERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON. Users must determine safe conditions for use and assume liability for any loss, injury, damage or expense resulting from use of this product.

N/A = Not applicable N/D = Not determined N/E = Not established