

# **MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME:**

**Citric Acid**

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# Material Safety Data Sheet

Material Name: Citric Acid 410

ID: 942600186AL

## \*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

**Product Use:** Chelating Agent

### Manufacturer Information

Ridley Feed Ingredients  
PO Box 110  
1609 1<sup>st</sup> Avenue  
Mendota, IL 61342

### Emergency phone number

Director, QA and Regulatory Compliance 507-388-9468

### General Comments

Citric acid may increase the solubility of Tetracyclines when used in poultry drinking water. Citric acid may also be used as a waterline cleaner and antimicrobial.

## \*\*\* Section 2 - Composition / Information on Ingredients \*\*\*

### Composition

CAS #	Component	Percent
77-92-9	Citric Acid	100

### Component Information/Information on Non-Hazardous Components

This product is considered hazardous under the criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard).

## \*\*\* Section 3 - Hazards Identification \*\*\*

### Emergency Overview

This product is a translucent crystalline powder. Product is irritating to the eyes, respiratory system and skin. Dust/air mixtures may explode.

### Potential Health Effects: Eyes

Exposure to powder or concentrated solutions of this product can cause severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Exposure can cause permanent corneal damage.

### Potential Health Effects: Skin

This product can cause mild to moderate irritation to the skin. Repeated contact with this material may produce dermatitis. No components in this product are known to be absorbed through the skin.

### Potential Health Effects: Ingestion

Ingestion of large amounts of product can cause acute gastrointestinal irritation with vomiting and diarrhea. Concentrated solutions can irritate and damage the soft tissues of the gastrointestinal tract.

### Potential Health Effects: Inhalation

Inhalation of product dusts (or solution mist) can be irritating to the respiratory system.

### Medical Conditions Aggravated by Exposure

Pre-existing eye, respiratory system and skin conditions

**HMIS Ratings: Health: 3 Fire: 1 Physical Hazard: 0**

**Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard**

## \*\*\* Section 4 - First Aid Measures \*\*\*

### First Aid: Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Seek immediate medical attention if irritation develops or persists.

### First Aid: Skin

For skin contact, wash immediately with soap and water. Continue flushing skin with water for 15 minutes. Immediately take off all contaminated clothing. Seek immediate medical attention if irritation develops or persists.

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## First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice from a physician or Poison Control Center.  
Do not induce vomiting.

## First Aid: Inhalation

If inhaled, immediately remove the affected person to fresh air. Seek immediate medical attention if irritation develops or persists.

## First Aid: Notes to Physician

None

## \*\*\* Section 5 - Fire Fighting Measures \*\*\*

Flash Point: NA ° F (87° C)

Upper Flammable Limit (UFL): 65%

Auto Ignition: 1832° F (1000° C)

Rate of Burning: Not available

Method Used: NA

Lower Flammable Limit (LFL): 8%

Flammability Classification: NA

## General Fire Hazards

Slight fire hazard. Dust/air mixtures may explode.

## Hazardous Combustion Products

Thermal decomposition products include oxides of carbon.

## Extinguishing Media

Use methods for the surrounding fire.

## Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

NFPA Ratings: Health: 3 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## \*\*\* Section 6 - Accidental Release Measures \*\*\*

## Containment Procedures

Not ordinarily required.

## Clean-Up Procedures

Sweep up or gather material and place in appropriate container for disposal. Wash spill area thoroughly. Wear appropriate protective equipment during cleanup. See product label for more information. Keep away from sparks and flame.

## Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

## Special Procedures

Wear appropriate personal protective equipment. Prevent entry into sewers, drains, underground or confined spaces, water intakes and waterways. See product label for more information. Follow all Local, State, Federal regulations for disposal.

## \*\*\* Section 7 - Handling and Storage \*\*\*

## Handling Procedures

Avoid getting this material into contact with your skin and eyes. Do not inhale dust or solution mist of this product. Use this product with adequate ventilation. If ventilation is not sufficient to effectively prevent buildup of dust or mists, appropriate NIOSH respiratory protection must be provided. Wash thoroughly after handling. Keep out of reach of children.

## Storage Procedures

Store in a cool, dry well-ventilated place. Store in original container and out of reach of children.

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## \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

### Exposure Guidelines

#### A: General Product Information

Product does not have exposure limits listed with ACGIH, OSHA or NIOSH. Exposure should be kept to a minimum.

#### Engineering Controls

Ventilation should effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.

### PERSONAL PROTECTIVE EQUIPMENT

#### Personal Protective Equipment: Eyes/Face

Wear chemical goggles, add face shield if splashing is possible.

#### Personal Protective Equipment: Skin

Use impervious gloves. Normal work clothing (long sleeved shirts and long pants) is recommended.

#### Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively prevent buildup of dusts or solution mists, appropriate NIOSH respiratory protection must be provided. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage must be implemented.

#### Personal Protective Equipment: General

Laundry contaminated clothing before reuse. Eye wash fountain and emergency showers are recommended.

## \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

Appearance:	Translucent	Odor:	Odorless
Physical State:	Crystalline powder	pH:	2.2 (0.1 N solution)
Vapor Pressure:	NA	Vapor Density:	NA
Boiling Point:	NA	Melting Point:	306-318 °F (152-159) °C
Solubility (H2O):	Soluble	Specific Gravity:	1.665
Evaporation Rate:	NA	Viscosity:	NA

## \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

### Chemical Stability

This is a stable material.

### Chemical Stability: Conditions to Avoid

Keep away from heat, sparks, or open flame.

### Incompatibility

Avoid strong oxidizing agents, bases, metals, reducing agents.

### Hazardous Decomposition

Thermal decomposition products include oxides of carbon.

### Hazardous Polymerization

Will not occur.

## \*\*\* Section 11 - Toxicological Information \*\*\*

### Acute and Chronic Toxicity

#### A: General Product Information

Product (citric acid) has an oral LD50 value (rat) of 3000 mg/kg. Irritating to eyes (severe), skin (mild to moderate) and mucus membranes of the respiratory and digestive tracts (moderate to severe).

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## Carcinogenicity

### A: General Product Information

No information available for the product

### B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

## Chronic Toxicity

Chronic ingestion may cause erosion of the teeth and local irritation..

## \*\*\* Section 12 - Ecological Information \*\*\*

### Ecotoxicity

#### A: General Product Information

If discharged to the aquatic environment in sufficient quantity, citric acid may cause transient fish and invertebrate toxicity by lowering the pH to toxic levels. Citric acid has an LC50/48 hr. of 160 mg/L for green crab (*carcinus maenas*).

#### Environmental Fate

Citric acid is expected to readily biodegrade and will not bioaccumulate.

## \*\*\* Section 13 - Disposal Considerations \*\*\*

### US EPA Waste Number & Descriptions

#### A: General Product Information

You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

#### B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

### Disposal Instructions

Dispose of waste material according to Local, State, Federal, Environmental Regulations.

## \*\*\* Section 14 - Transportation Information \*\*\*

### US DOT Information

Not regulated

### Canada Transportation of Dangerous Goods Information

Not regulated

## \*\*\* Section 15 - Regulatory Information \*\*\*

### US Federal Regulations

#### A: General Product Information

No information available.

#### B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

SARA 311/312: Acute Health Yes Chronic Health No Fire No Pressure No Reactive No

### State Regulations

#### A: General Product Information

Other state regulations may apply. Check individual state requirements.

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## Additional Regulatory Information

### A: General Product Information

Two components not listed on the TSCA Inventory are exempt from TSCA regulation under FIFRA when used as a pesticide. All other components of this material are listed on the TSCA Inventory. Supplier(s) of trade secret component(s) state that these components are contained on the TSCA inventory

### B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	NDSL	EINECS	AUST	MITI	PHIL	KOREA	ELINCS	CHINA
Citric Acid	77-92-9	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes

## \*\*\* Section 16 - Other Information \*\*\*

### Other Information

Disclaimer: Supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Material Safety Data Sheet before handling product

### Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists. AICS = Australian Inventory of Chemical Substances. CAS = Chemical Abstract Service. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. CHEMTREC = Chemical Transportation Emergency Center. DSL = Canadian Domestic Substance List. EINECS = European Inventory of New and Existing Chemical Substances. ELINCS = European List of Notified Chemical Substances. EPA = Environmental Protection Agency. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Material Information System. IARC = International Agency for Research on Cancer. IDLH = Immediately Dangerous to Life and Health. MITI = Japanese Ministry of International Trade and Industry. NDSL = Canadian Non-Domestic Substance List. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. NA = Not available or Not Applicable. SARA = Superfund Amendments and Reauthorization Act. TDG = Transportation of Dangerous Goods. TLV = Threshold Limit Value. TSCA = Toxic Substances Control Act. WHMIS = Workplace Hazardous Materials Information System.

This is the end of MSDS # 942600186AL