

SAFETY DATA SHEET

CITRIC ACID ANHY. FINE GRAN

1. PRODUCT INFORMATION AND COMPANY IDENTIFICATION

Product Name: Citric Acid Anhy. Fine Gran
INCI Name: Citric Acid
CAS Number: 77-92-9
Recommended Use: Citric Acid can be used in food as food additives and also in technical application as clarifying agent, water softener, buffer, foam booster and stabilizer, complexing agent and as an intermediate in production of organic chemicals.
Company: Kraft Chemical Company
Melrose Park, IL 60160
Phone: 708-345-5200
Fax: 708-345-4005

Emergency Phone Number

Emergency: Chemtrec: 800-424-9300

2. HAZARD IDENTIFICATION

Classification of the Substance or Mixture

According with the version of the Globally Harmonized system of Classification and labeling adopted in the United States and Regulation 1272/2008/EC [CLP]: Eyes irritant category 2(H319)

Label Elements



Signal word:
Warning

Hazard Statement:
Causes serious eye irritation. H319

Precautionary Statement:
Wash hands thoroughly after handling. P264
Wear eye protection. P280



Precautionary Statement. IF IN EYES: P305
Response :
Rinse cautiously with water for several minutes. P351
Remove contact lenses, if present and easy to do Continue rinsing. P338
If eye irritation persists: P337
Get medical advice/attention. P313

Other Hazards

Fire and Explosion Hazard:

May form combustible dust concentrations in air. Possibility of dust explosion. It is recommended that all dust control equipment and material transport systems involved are engineered to prevent conditions contributing to dust explosions. Do not allow dust to accumulate on flat surfaces, on rafters or building structural components. Keep away from all ignition sources including heat, sparks and flame.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Citric acid - Food grade
CAS number	77-92-9
EINECS number	201-069-1
Synonyms	2 - Hydroxy -1,2,3 propanetricarboxylic acid Acidulant - Citric acid - food additive E330.

4. FIRST AID MEASURES

Description of First Aid Measures

General advice	Seek medical attention if irritation develops after first aid application
Inhalation	Move people from the exposure to fresh air.
Skin contact	Wash skin with soap and water.
Eye contact	Remove particulates by irrigating with eye wash solution or clean water, holding eyelids apart.
Ingestion	Wash mouth and flush throat upto the stomach.

Most Important Symptoms and Effects, both Acute and Delayed

Route(S) of Entry: Skin Contact; Eye Contact

Human Effects and Symptoms of Overexposure:

Acute Skin Contact: This product is irritating to the skin resulting in reddening, stinging, and swelling.



Acute Eye Contact: This product is irritating to the eyes resulting in stinging, reddening, tearing, and swelling.

Chronic Effects of Exposure: No applicable information was found concerning any adverse chronic health effects from overexposure to this product.

Carcinogenicity: The components of this product are not listed by NTP, IARC or regulated as a carcinogen by OSHA.

Medical Conditions

Aggravated by Exposure: Persons with pre-existing eye or skin disorders may be more susceptible to the effects of this product.

Indication of Any Immediate Medical Attention and Special Treatment Needed.
None Anticipated

5. FIRE FIGHTING MEASURES

Extinguishing Media

Water spray, dry powder, carbon dioxide or media appropriate for surrounding fire. Use of water jet may cause explosive dust conditions.

Specific Hazards

Fire And Explosion Hazard: Possibility of dust explosion. It is recommended that all dust control equipment and material transport systems involved are engineered to prevent conditions contributing to dust explosions. Do not allow dust to accumulate on flat surfaces, on rafters or building structural components. Use of water jet may cause explosive dust conditions. SEE NFPA 61, Standard for the prevention of Fire and Dust Explosions in Agricultural and Food Processing Facilities, 2008 or later Edition, and other related standards.

Specific Protective Equipment and Precautions for Fire-Fighters

Wear self-contained breathing apparatus and full protective gear. Use water spray to cool fire exposed containers.

Flammability Class (OSHA)

Not applicable

Hazardous Combustion Products

Carbon dioxide and carbon monoxide

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Use personal protective equipment. Wear eye protection. Avoid contact with skin and eyes.

6.2 ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage if safe to do so. No special environmental precautions required



Methods for Cleaning Up

Vacuum or sweep spills. Minimize dust generation.

If washing down spilled area is necessary, use copious amounts of water and control runoff.

Follow local, state and federal regulations for product disposal

Reference to Other Sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment

See Section 13 for disposal information

7. HANDLING AND STORAGE

Precautions for Safe Handling

See NFPA 61, Standard for the Prevention of Fire and Dust Explosions in Agricultural and Food Processing Facilities, 2008 Edition, and other related standards. Use with adequate ventilation. Minimize dust generation and accumulation; dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are disturbed.

All dust control equipment and material transport systems involved are engineered to prevent conditions contributing to dust explosions and may require explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Bonding and grounding systems may be required.

Dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) should be designed to limit or prevent leakage of dust into the work area.

Do not allow dust to accumulate on flat surfaces, on rafters or building structural components. Routine housekeeping should be instituted to reduce dust accumulation. Use Avoid dispersal of dust in the air; use vacuum or wet sweeping methods. Do not use compressed air to clean surfaces.

Keep away from all ignition sources including heat, sparks, and flame. Where dust accumulations occur use non-sparking tools.

Conditions of Safe Storage, Including Any Incompatibilities

Store in a cool dry place. Store in a tightly closed container/bag.

The packaging material should have reasonable moisture and air barriers and comply with food regulations.

Specific End Use(S)

See overview of the exposure scenario and summary of risk management measures in Appendix 1

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure limits: Nuisance dust (also called particulate not otherwise regulated (PNOR)).

OSHA PEL: 15 mg/m³ Total dust

5 mg/m³ Respirable dust



ACGIH TLV: 10 mg/m³ Inhalable dust
 5 mg/m³ Respirable dust
 15 mg/m³ Total dust

Exposure Controls

Appropriate Engineering Controls:

Ventilation: See NFPA 61, Standard for the Prevention of Fire and Dust Explosions in Agricultural and Food Processing Facilities, 2008 Edition, and National Fire Protection Association 650, Standard for Pneumatic Conveying Systems for Handling Combustible Materials, 1997 Edition and other related standards. Normal industrial hygiene measures should be sufficient for protection of employees from exposure to dusts. Local and mechanical exhaust is desirable when dumping bags.

Appropriate Personal Protective Equipment:

Eye protection: Safety glasses are recommended. Safety goggles are desirable when dumping bags.

Emergency wash facilities: Eye wash is recommended for conditions where dust generation is likely.

Special protective clothing: Not normally required.

Gloves: Not normally required. Use ordinary work gloves if dust dries skin.

Respirator: NIOSH approved N-95 dust respirator if working in situations that could generate large amounts of airborne dust.

FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS:

See section 5.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical form	Solid
Color	White to off-white
Odor	Essentially odorless to very slight sugar odor
pH (concentration)	1.8 at 50 g/L (25°C)
Boiling point	>175°C
Flash point	155°C
Melting/freezing point	approx. 153°C at 1,013 hPa
Decomposition temperature	NA
Auto-ignition temperature	345°C
Explosion properties	NA
Oxidising properties	NA
Vapour pressure	2.21*10 ⁻⁶ Pa at 25°C
Vapor density	0.62 (Air = 1)
Relative density	1.665 at 20°C
Bulk density	NA



Specific gravity	1.542
Viscosity	NA
Water solubility	590 g/L at 20°C
Solubility (non aqueous)	Methyl alcohol: completely miscible
Partition coefficient	In OCTANOL/ WATER (log value): Log Kow: -0.2 to -1.8
Dissociation constant	pKa: 3.13, 4.76 and 6.4 at 25°
Evaporation rate	NA

Other Information

10. STABILITY AND REACTIVITY

Reactivity

Stable

Chemical Stability

Stable under normal conditions.

Polymerization will not occur.

Possibility of Hazardous Reactions

Not applicable

Conditions to Avoid

Practices which produce dust or disperse finely divided dust in air.

See NFPA 61. Standard for the Prevention of Fire and Dust Explosions in Agricultural and Food Processing Facilities, 2008 Edition, and other related standards.

Incompatible Materials

Oxidizing agents, strong acids

Hazardous decomposition products:

Nothing unusual

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Inhalation

ORAL: LD50: 5400 – 5790 mg/kg bw (mouse) / LD50: 11700 mg/kg bw (rat)

DERMAL: LD50 >2000 mg/kg bw rat

Ingestion

No effects known or anticipated.

Skin irritation / corrosion

Sustained exposure in a dusty manufacturing environment may result in mechanical irritation in the creases of the skin, particularly at the fingers, or other drying effects. no health effects known or anticipated.

Eye irritation

Irritating to eyes.



Skin sensitisation	Not sensitizing
Chronic toxicity	Not known or anticipated
Genetic toxicity	Not known or anticipated
Carcinogenicity	Not classifiable as Carcinogen.
Reprotoxicity	Not known or anticipated
Specific effects	Not applicable

12. ECOLOGICAL INFORMATION

Toxicity
LC50 for freshwater fish: 440 mg/l
EC50/LC50 for freshwater invertebrates: 1535 mg/l.

Persistence/Degradability
Readily biodegradable

Bioaccumulative Potential
Log Kow <3, not bioaccumulative

Mobility in Soil
Not applicable

BPT, vPvB
The substance does not meet the criteria for PBT or vPvB.

Other Adverse Effects
None known

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods
Follow local, state and federal regulations for product disposal. Not a hazardous waste unless contaminated with hazardous products.

14. TRANSPORT INFORMATION

International regulations (RID/ADR; RTMDR; IMDG; IATA/OACI): Not classified as dangerous for transport.
DOT shipping label: Non-hazardous

15. REGULATORY INFORMATION

Safety, Health And Environmental Regulations
According with the version of the Globally Harmonized System of Classification and labeling



adopted in the United States and Regulation 1272/2008/EC(CLP): Classified

Chemical Safety Assessment

US Federal Regulations:

Clean Air Act:

ODS: Not applicable.

SARA (EPCRA) Section 313 (40 C.F.R. § 372.65): Not applicable.

TSCA Status: On TSCA inventory.

State Reporting Requirements:

California Proposition 65: Not applicable.

16. OTHER INFORMATION

All statements, technical information and recommendations contained herein are based on tests and data which Kraft Chemical Company believes to be currently reliable, but this accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this company or others covering any process, composition of matter or use. Since we shall have no control of the use of the product described here in, we assume no Liability for loss or damage incurred from the proper or improper use of such product.

