


Material Safety Data Sheet		
Citric Acid Monohydrate		
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1. Chemical Product and Company Identification

INCI name: Citric Acid

CAS No.: 77-92-9

Chemical structure: $\text{HOC}(\text{CO}_2\text{H})(\text{CH}_2\text{CO}_2\text{H})_2\cdot\text{H}_2\text{O}$

Trade name: Citric Acid Monohydrate

Product application:

- Used as a buffer and chelating agent in personal care products and cosmetics.
- Used as a food additive in food industry.
- Used for metal surface treatment.
- Used as a retardation agent in cement.

Supplier name: GUANGZHOU YESER CHEMICALS CO., LTD

Supplier address: Room 903-05, Building E, Longxi Center, No.18 Qide Road, Guangzhou City, China

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2. Hazards Identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health Eye	Irrit. 2 - H319
Environment	Not classified.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008



Signal Word Warning


Hazard Statements

H319 Causes serious eye irritation.

Precautionary Statements

P337+313 If eye irritation persists: Get medical advice/attention.

Supplementary Precautionary Statements

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P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash contaminated skin thoroughly after handling.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3. Composition/Information on Ingredients

Component	CAS NO.	Percentage, wt, %
Citric Acid	77-92-9	91.2~92.5
Water	7732-18-5	7.5~8.8

4. First aid Measures

4.1. Description of first aid measures

Inhalation

Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen. Get medical attention if any discomfort continues.

Ingestion

Immediately give a couple of glasses of water or milk, provided the victim is fully conscious. Get medical attention if any discomfort continues.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

General information

The severity of the symptoms described will vary dependent of the concentration and the length of exposure. If adverse symptoms develop as described the casualty should be transferred to hospital as soon as possible. For further information, please refer to section 11.

4.3. Indication of any immediate medical attention and special treatment needed


Treat Symptomatically.

5. Fire-fighting Measures

5.1. Extinguishing media

Extinguishing media

Water spray, foam, dry powder or carbon dioxide.

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5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Fire or high temperatures create: Irritating gases/vapors/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂).

Unusual Fire & Explosion Hazards

High concentrations of dust may form explosive mixture with air.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Containers close to fire should be removed immediately or cooled with water.

Protective equipment for fire-fighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not allow to enter drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Avoid generation and spreading of dust. Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like.

Flush with plenty of water to clean spillage area. Do not let washing down water contaminate ponds or waterways.

6.4. Reference to other sections

For waste disposal, see section 13.

7. Handling and storage

7.1. Precautions for safe handling

Avoid inhalation of dust and contact with skin and eyes. Avoid handling which leads to dust formation.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Store separated from: Alkalis. Oxidizing material.

Storage Class

Chemical storage.


7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

8. Exposure controls/personal protection

8.1. Control parameters

Ingredient Comments

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NUI = Nuisance dust, WEL TWA 4mg/m3 Respirable Dust, 10 mg/m3 Total Dust.

8.2. Exposure controls

Protective equipment



Process conditions

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists. Wear mask supplied with: Dust filter P2 (for fine dust).

Hand protection

For prolonged or repeated skin contact use suitable protective gloves. Butyl rubber. Polyvinyl chloride (PVC).

Eye protection

Wear approved safety goggles.

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact. Provide eyewash station.


9. Physical and chemical properties

Appearance: Crystals or crystalline	Relative density: 1.54g/cm ³ @ 20°C
Color: White	pH-Value, Diluted Solution: 1.6 @ 100g/l
Odor: Odorless	Solubility Value (G/100G H ₂ O@20°C): 60
Solubility: Soluble in water	Auto Ignition Temperature: 1010°C
Melting point: 156°C	

10. Stability and reactivity

10.1. Reactivity

Violent reaction with: Strong alkalis. Strong oxidizing agents.

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10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Not known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Materials To Avoid

Strong alkalis. Strong oxidizing agents.

10.6. Hazardous decomposition products

Fire or high temperatures create: Irritating gases/vapors/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂).

11. Toxicological information

11.1. Information on toxicological effects

Toxic Dose 1 - LD 50

5040 mg/kg (oral-mouse)

Toxic Dose 2 - LD 50

3000 mg/kg (oral rat)

Acute toxicity:

Acute Toxicity (Oral LD50): > 7000 mg/kg Rabbit

ATE (Oral): 3000 mg/kg

Aspiration hazard:

Not anticipated to present an aspiration hazard based on chemical structure.

Inhalation

Dust may irritate respiratory system or lungs.

Ingestion

May irritate and cause stomach pain, vomiting and diarrhea.

Skin contact

Skin irritation is not anticipated when used normally.

Eye contact

Causes serious eye irritation. Particles in the eyes may cause irritation and smarting.

Route of entry

No route of entry noted.


Target Organs

No specific target organs noted.

12. Ecological information

12.1. Toxicity

Acute Fish Toxicity

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Not considered toxic to fish.

LC 50, 96 Hrs, Fish mg/l 440 - 760

12.2. Persistence and degradability

Degradability

There are no data on the degradability of this product.

12.3. Bio accumulative potential

Bio accumulative potential

No data available on bioaccumulation.

12.4. Mobility in soil

Mobility:

The product is soluble in water.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

None known.

13. Disposal considerations

13.1. Waste treatment methods

Recover and reclaim or recycle, if practical. Dispose of waste and residues in accordance with local authority requirements.

Waste Class

EWC-code: 06 01 06. 7134. Organic acids.

14. Transport information

General The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group


Not applicable.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

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Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

15. Regulatory Information

The following laws, regulations, rules and standards have made corresponding provisions on the management of the chemical:

Workplace Safety Chemicals Regulations

Convention on the Safe Use of Chemicals in the Workplace

16. Other Information

Writing and revising information

Date originally compiled: April 12, 2016

Date of last revision: April 11, 2021

Re-compiled according to the latest national standard GB1886.235-2016, the version has been upgraded from 1.0 to 2.0, and the product information has been updated.

IMPORTANT: while the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data, and information furnished by our company hereunder are given gratis and we assume no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk.

END OF DATA SHEET