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Material Safety Datasheet

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Section 1 - Chemical Product and Company Identification

Product Name/ Trade name: CITRIC ACID MONOHYDRATE BP93 8-80MESH
Supplier: COFCO BIOCHEMICAL (THAILAND) CO.,LTD
263 Moo 11 T.Nongbua A.Bankhai Rayong Zip: 21120
CAS #: 5945-29-1
Synonym: beta-Hydroxy-tricarboxylic acid / citric acid monohydrate
Chemical Name: Organic acid
Chemical Formula: $C_6H_8O_7 \cdot (H_2O)$

Section 2 - Composition and Information on Ingredients

Name: CITRIC ACID MONOHYDRATE BP93 8-80MESH
CAS #: 5949-29-1
% byWeight: 100
LC50/LD50: ORAL (LD50): Acute: 5040 mg/kg (Mouse). 3000 mg/kg (Rat). 11700 mg/kg [Rat].

Section 3 - Hazards Identification

1. Potential Acute Health Effects:

Very hazardous in case of eye contact (irritant, corrosive). Hazardous in case of skin contact (corrosive, irritant). Slightly hazardous in case of ingestion, of inhalation (lung irritant). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching.

2. Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion.

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

Repeated exposure of the eyes to a low level of dust can produce eye irritation.

Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.



Section 4 - First Aid Measures

1. Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

2. Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

3. Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention. Oxygen may be administered if breathing is difficult.

4. Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Have conscious person drink several glasses of water. Get medical attention if symptoms appear.

Section 5 - Fire Fighting Measures

1. Products of Combustion: These products are carbon oxides (CO, CO₂).

2. Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Qualified persons wearing full fire-fighting suits and approved/certified self-contained breathing apparatus. Keep drums cool by spraying with water.

Move containing vessels from fire if without risk.

3. Special Remarks on Fire Hazards:

Material in powder form, capable of creating a dust explosion. When heated to decomposition it emits acrid smoke and irritating fumes.

4. Special Remarks on Explosion Hazards:

Not available.

Slightly flammable in presence of open flames and sparks.



Section 6 - Accidental Release Measures

1. Small Spill and Leak:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

2. Large Spill and Leak:

Corrosive solid.

Stop leak if without risk. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

3. Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 7 - Handling and Storage

1. Precautions:

Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Never add water to this product if ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, alkalis.

2. Incompatibility:

Reactive with oxidizing agents, alkalis. Slightly reactive to reactive with reducing agents.

3. Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8 - Exposure Controls/Personal Protection

1. Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

2. Personal Protection:

Eyes: Splash goggles.

Body: Synthetic apron.

Respiratory: Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands: Gloves (impervious).

Feet: Not applicable.

Protective Clothing (Pictograms):



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Section 9 - Physical and Chemical Properties

Physical State and Appearance: Solid. (Solid crystalline powder. Deliquescent crystals solid.)

Odor: Odorless.

Taste: Fruity, acid.

Molecular Weight: 210.2

Color: Colorless. White.

Boiling/Condensation Point: Not available.

Melting/Freezing Point: 153Co

Specific Gravity: 1.542 (Water = 1)

Vapor Pressure: Non volatile

Vapor Density: Not available.

Volatility: Not available.

Evaporation Rate: 0

Odor Threshold: Not available.

Viscosity: Not available.

Log Kow: Not available.

Ionicity (in Water): Not available.

Solubility: Easily soluble in cold water, hot water. Partially soluble in diethyl ether.

Flash Points: Not available.

Flammable Limits: Not available.

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Section 10 - Stability and Reactivity

1. Stability: The product is stable.

2. Conditions of Instability: Not available.

3. Incompatibility with various Substances: Reactive with oxidizing agents, alkalis. Slightly reactive to reactive with reducing agents.

4. Corrosivity: Corrosive in presence of stainless steel(304).

Slightly corrosive in presence of steel, of aluminum.

Non-corrosive in presence of stainless steel(316).

5. Hazardous Decomposition Products: Not available.

6. Special Remarks on Reactivity: Not available.

7. Special Remarks on Corrosivity: Not available.



Section 11 - Toxicological Information

1. Routes of Entry: Absorbed through skin. Eye contact. Inhalation.
2. Toxicity to Animals: Acute oral toxicity (LD50): 3000 mg/kg (Rat).
3. Acute Effects on Humans:
Eyes: Very hazardous in case of eye contact (irritant, corrosive). Eye contact can result in corneal damage or blindness. Inflammation of the eye is characterized by redness, watering, and itching.
Skin: Hazardous in case of skin contact (corrosive, irritant). The amount of tissue damage depends on length of contact. Skin contact can produce inflammation and blistering. Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Inhalation: Slightly hazardous in case of inhalation (lung irritant). Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Over-exposure by inhalation may cause respiratory irritation.
Ingestion: May be fatal if swallowed. May cause burns to mouth, throat, and stomach.
4. Chronic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion.
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated exposure of the eyes to a low level dust can produce eye irritation.
Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.
5. Special Remarks on Toxicity to Animals: Not available.
6. Special Remarks on Chronic Effects on Humans: Not available.
7. Special Remarks on Other Toxic Effects on Humans: Not available.

Section 12 - Ecological Information

1. Ecotoxicity: Ecotoxicity in water (LC50): 440 to 706 mg/l 96 hours (Fish. (Goldfish)).
2. BOD5 and COD: The BOD5 is 0.528 mg/kg [5 day(s)] bod5. The COD is 0.728 mg/kg[day(s)].
3. Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
4. Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.
5. Special Remarks on the Products of Biodegradation: biodegradation: 98% after 2 days

Section 13 - Disposal Considerations

Waste Information: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream: Not available.



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Section 14 - Transport Information

1. TDG Classification: Not controlled under TDG.
2. PIN: Not applicable.
3. Maritime Transportation: Not available.
4. Special Provisions for Transport: Not applicable.

Section 15 - Other Regulatory Information and Pictograms

1. WHMIS (Classification): WHMIS Class E: Corrosive solid.
2. Regulatory Lists: CEPADSL: Citric acid - Mono. BP / USP
3. Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.
4. Other Classifications:
HCS (U.S.A.): Not controlled under the HCS (United States).
USA Regulatory Lists: GRAS, FDA.29 CFR 182.1033: Citric acid - Mono. USP Fine
DSCL (EEC): R34- Causes burns.
International Regulations Lists: No products were found.

Section 16 - Other Information

References: -Manufacturer's Material Safety Data Sheet.
Other Special Considerations: Not available.
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