

CITRIC ACID 32%

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : CITRIC ACID 32%
Other names : -
Product use : -
MANUFACTURER : Asia Union Electronic Chemical Corporation No.31,Chien-Yeh Rd.,Tah-Liao District, Kaohsiung City 83164,Taiwan (R.O.C) Tel: 886-7-7878485 Fax: 886-7-7879743 No. 66, Wenpu Middle Road, Qiandeng Town, Kunshan City 215341, Jiangsu Province, China Tel: 0512-36828000 ext 8921 AUECC-RENO : Address : 1400 Waltham Way McCarran, NV 89437 Tel : 1-775-236-3200
IN CASE OF EMERGENCY CALL: Within Taiwan : Tel: 886-07-7878485 ext 220 Fax: 886-07-7879743 Within China : Hotline for Chemical Incident Response 025-85477110 For Chemical Emergency, such as Spill, Leak, Fire, Exposure or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-527-3887 (collect calls accepted) While you call CHEMTREC, please address the AUECC reference no. CCN648809

2. HAZARDS IDENTIFICATION

Classification : Acute Toxicity Category5 (swallow) 、 Skin Corrosion/Irritation Category2 、 Serious Eye Damage/Eye Irritation Category1
The Most Important Hazards and effect Label elements : Hazard symbol :  Signal word : Danger! Hazard statement : May be harmful if swallowed Causes skin irritation Causes serious eye damage Precautionary statement : P264-Wash thoroughly after handling.

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P280-Wear protective gloves/protective clothing/eye protection/face protection.
P312-Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352-IF ON SKIN: Wash with plenty of soap and water.
P332+P313-If skin irritation occurs: Get medical advice/attention.
P362-Take off contaminated clothing and wash before reuse.
P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405-Store locked up.
P501-Dispose of contents/container to local/regional/national/international regulations

Other hazards : -

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical properties: Citric acid aqueous solution		
Ingredient(s)	%(by weight)	CAS Number
Citric Acid	31.0-33.0%	00077-92-9

4. FIRST AID MEASURES

The First-aid Information :

In case of Eyes: Immediately flush the eyelids to relieve warm water from the exposed eyes for at least 15 minutes. If in contact with the vapor, move the patient to fresh air or remove the source of contamination before flushing and seek medical attention as soon as possible.

In case of Skin: Take off the contaminated clothing at the same time immediately wash contact with water and soap, if the symptoms are not removed should be immediately sent to the medical treatment; clothing to be used should be cleaned.

In case of Ingestion: If the patient is about to lose consciousness or has lost consciousness or convulsions, do not feed anything by the mouth, the patient to the left and head down, to the hospital or the poison advice center asked whether the vomiting, not to make the patient alone.

In case of Inhalation: Remove from exposure to fresh air immediately; if the symptoms continue to be sent to medical treatment, if the difficulty in breathing should be provided with oxygen; keep the patient quiet and maintain their normal body temperature.

The Most Important Symptoms and Hazardous Effects : -

Protection of First-aiders : First aid should be carried out in a safe area with level c.

Notes to a Physician : -

5. FIRE FIGHTING MEASURES

Extinguishing Media :

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1. Water, carbon dioxide, chemical dry powder or general foam fire extinguishers.
2. In case of fire, use a general foam fire extinguisher or a large amount of water mist to extinguish the fire.
Specific Hazards when Fire-fight :
1. Minor fire hazard.
2. The dust/air mixture may ignite or explode.
Specific Fire-fighting Procedure :
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.
Specific Protection of Firefighters : -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions :
Isolation of hazardous areas and prohibit entry of unrelated personnel.
Use proper personal protective equipment as indicated in Section 8.
Environmental Precautions :
Keep away from water and sewers.
Methods for Cleaning up :
Clean up spills immediately, observing precautions in the Protective Equipment section. Clean generating spilly conditions. Remove all sources of ignition. Provide ventilation. Spill may be neutralized with lime. Do not get water inside containers.

7. HANDLING AND STORAGE

Handling :
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Do not allow contact with water. Keep from contact with moist air and steam.
Storage :
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls :			
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.			
Control parameters			
TWA	STEL	Ceiling	Biological standards

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Personal protective equipment : Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin: Wear appropriate protective gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to prevent skin exposure. Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.			
Health measures: 1. Remove the contaminated clothing as soon as possible after work, wash it before you can wear it or discard it, and inform the laundry personnel of the harmfulness of the pollutant. 2. Smoking or eating is strictly prohibited in the workplace. 3. Wash hands thoroughly after handling this product. 4. Maintain workplace cleanliness.			

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Colorless liquid	Odor : Tasteless
Olfactory threshold : —	Melting point : —
pH : 2.2 (0.1 N)	Boiling point / boiling point range : —
Flammability (solid, gas) : —	Flash point : —
Decomposition temperature : —	Test method (open or closed cup) : —
Auto-ignition temperature : —	Explosion limit : —
Vapor Pressure : /	Vapor density : /
density : 1.21(WATER=1)	Solubility : Dissolved in water
log kow : —	Evaporatiom Rate : —

10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures.
Possible hazard response under special conditions: 1. Alkaline earth carbonate and bicarbonate: incompatible 2. Alkali: May generate heat and release toxic gases. 3. Brass: Corrodes the citrate complex. 4. Metal nitrate: may cause an explosion hazard.

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5. Oxidizer (strong): fire and explosion hazard.
6. Active metal: Release of hydrogen.
7. Reducing agent: Incompatible.
Conditions to avoid: 1. Avoid high temperature, flame, flash fire and other ignition sources 2. Avoid contact with incompatible materials
Materials to avoid : Alkali, metal, oxidizing substance, oxidizing agent
Hazardous decomposition products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Route of exposure: skin, inhalation, ingestion, eyes.
Symptoms: Pain, tearing, photophobia, burning, blindness, calcium deficiency, bleeding, blood clots, gastrointestinal damage
Acute toxicity : Skin: Causes mild to moderate skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Eyes: Causes mild to severe eye irritation and possible injury. Ingestion: May cause gastrointestinal (digestive) tract irritation with nausea, vomiting, diarrhea. Excessive intake may cause erosion of teeth and hypocalcemia (calcium deficiency in blood). May affect behavior/central nervous system (tremor, convulsions, muscle contraction or spasticity) . Inhalation: Causes mild to severe respiratory tract and mucous membrane irritation. LD50 (test animal, absorption route): 3000 mg / kg (rat, swallowed) LC50 (test animals, absorption route): - 750µg / 24 hours (rabbit, eyes): Causes severe irritation. 500 mg / 24 hours (rabbit, skin): Causes mild irritation. 0.5 mL (rabbit, skin): Causes moderate irritation.
Chronic Toxicity: Frequent intake of citrated beverages may cause erosion of dental enamel and irritation of mucous membranes.

12. ECOLOGICAL INFORMATION

Ecotoxicity: LC50 (fish): 1516 mg/L/96 hr (Lepomis macrochirus) [static] EC50 (aquatic invertebrates): 120 mg/L/72 hr (Daphnia magna) Bioconcentration factor (BCF): 3.2 (estimated)
Persistence and degradability:-

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Half-life (air):- Half-life (water surface):- Half-life (groundwater):- Half-life (soil):-
Bioaccumulative potential : The accumulation in aquatic organisms is low.
Mobility in soil : The fluidity in the soil is very high.
Other adverse effects : --

13. DISPOSAL CONSIDERATION

Waste Management Information Waste and all of the polluted water must be disposed of in accordance with federal, state and local environmental control regulations.

14. TRANSPORT INFORMATION

UN classification number : —
Proper D.O.T Shipping Name : —
Hazard Class : —
Packing Group : —
Marine pollution : none
Specific precautionary transport measures and conditions : —
International transportation regulations : —
Domestic transportation regulations : Transportation Safety Rule Shipping Package Safety Rule Enforcement of Hazardous Material Transportation, Taiwan Railroad Administratio Hazard labeling and general rules

15. REGULATORY INFORMATION

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Taiwan

1. Occupational safety and health facilities rules
2. Hazardous chemicals labeling and general rules
3. Allowance standards for labor workplaces
4. Road traffic safety rules
5. Hazardous Chemicals Assessment and Classification Management Measures

16.OTHER INFORMATION

References :

Service department of vocational rehabilitation for the workers of occupational accidents(GHS database)

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