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Contact: sales@camachem.com

Material Safety Data Sheet (MSDS)

Section 1: Chemical Product and Company Identification			
Product Name	Citric Acid Anhydrous 99%		
CAS Number	77-92-9		
Chemical Formula	C6H8O7		
Company Name	CAMACHEM (Part of CAMAL Group) 3F Jinlong East Beijing Station Road Chaoyang District, Beijing, China		
Contact	sales@camachem.com		
Company Website	www.camachem.com		
Section 2: Composition and Information on Ingredients			
CAS#	Chemical Name	content	EINECS#
77-92-9	Citric acid	>99	201-069-1
Hazard Symbols: XI Risk Phrases: 36/37/38			
Section 3: Hazards Identification			
EMERGENCY OVERVIEW Irritating to eyes, respiratory system and skin. Potential Health Effects Eye: Causes severe eye irritation and possible injury. Skin: Causes skin irritation. Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Excessive intake of citric acid may cause erosion of the teeth. Inhalation: Causes respiratory tract irritation. Chronic: Repeated exposure may cause erosion of teeth. Chronic exposure may cause effects similar to those of acute exposure.			
Section 4: First Aid Measures			
Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.			

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Skin:
In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion:
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5: Fire and Explosion Data

General Information:
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 combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media:
Use water spray, dry chemical, carbon dioxide, or chemical foam.

Section 6: Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Spill may be carefully neutralized with lime (calcium oxide, CaO).

Section 7: Handling and Storage

Handling:
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Keep container tightly closed. Avoid ingestion and inhalation. Do not get in eyes. Avoid contact with skin and clothing.

Storage:
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

Section 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.

Exposure Limits CAS# 77-92-9: 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:
The absence of published exposure limits does not mean that a substance poses no inhalation hazard. If

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inhalation exposure is likely or if irritation or other symptoms are experienced, wear a NIOSH/MSHA or European Standard EN 149 approved respirator.

Section 9: Physical and Chemical Properties

Physical State: Crystalline powder
Color: white
Odor: Odorless.
pH: 1.7 (10% soln)
Vapor Pressure: 3.70E-009 mm Hg @ 25 deg C
Viscosity: Not available.
Boiling Point: 175 deg C (dec)
Freezing/Melting Point: 153 deg C
Autoignition Temperature: 1010 deg C (1,850.00 deg F)
Flash Point: Not applicable.
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
Decomposition Temperature: 175 deg C
Solubility in water: 59.2% (20 C)
Specific Gravity/Density: 1.665 g/cm³
Molecular Formula: C₆H₈O₇
Molecular Weight: 192.12

Section 10: Stability and Reactivity Data

Chemical Stability:
Stable under normal temperatures and pressures.
Conditions to Avoid:
Dust generation, moisture.
Incompatibilities with Other Materials:
Metal nitrates, strong oxidizing agents, strong reducing agents, strong bases, metals.
Hazardous Decomposition Products:
Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

RTECS#:
CAS# 77-92-9: GE7350000 LD50/LC50:
CAS# 77-92-9: Draize test, rabbit, eye: 750 ug/24H Severe; Draize test, rabbit, skin: 500 mg/24H Mild;
Oral, mouse: LD50 = 5040 mg/kg; Oral, rat: LD50 = 3 gm/kg.
Carcinogenicity:
Citric acid - Not listed by ACGIH, IARC, or NTP.
Other:
See actual entry in RTECS for complete information.

Section 12: Ecological Information

Section 13: Disposal Considerations

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist

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disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

Section 14: Transport Information

IATA
Not regulated as a hazardous material.
IMO
Not regulated as a hazardous material.
RID/ADR
Not regulated as a hazardous material.

Section 15: Other Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: Xi
Risk Phrases:
R 36/37/38 Irritating to eyes, respiratory system and skin.
Safety Phrases:
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 37/39 Wear suitable gloves and eye/face protection.
WGK (Water Danger/Protection)
CAS# 77-92-9: 0
Canada
CAS# 77-92-9 is listed on Canada's DSL List.
CAS# 77-92-9 is listed on Canada's Ingredient Disclosure List.
US FEDERAL
TSCA
CAS# 77-92-9 is listed on the TSCA inventory.

Section 16: Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.

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