

Material Safety Data Sheet

Section 1 - Product and Company Identification

Chemical Name	Citric acid anhydrous
Chemical Formula	C ₆ H ₈ O ₇
Product Name	Citric acid anhydrous
Company Identification	Showa Kako Corporation 18-23 Yoshino-cho, Suita City Osaka pref., 564-0054 JAPAN
Telephone Number	+81-6-6384-1501
24-hour Emergency Telephone Number	+81-6-6384-1501
Fax Number	+81-6-6384-2287

Section 2 - Hazards Identification

Inhalation	Dust from the product, if present, may cause respiratory information following an excessive inhalation exposure.
Skin	Immediately flush skin with copious amounts of water for at least 15 minutes.
Eyes	Immediately flush eyes with copious amounts of water for at least 15 minutes. Consult with ophthalmologist.
Ingestion	Not expected to present a significant ingestion hazards under anticipated condition of normal use.

GHS Classification

Physical Hazards

Explosives	Not classified
Flammable gases	Not classified
Flammable aerosols	Not classified
Oxidizing gases	Not classified
Gases under pressure	Not classified
Flammable liquids	Not applicable
Flammable solids	Not classified
Self-reactive substances and mixtures	Not classified
Pyrophoric liquids	Not classified
Pyrophoric solids	Not applicable
Self-heating substances and mixtures	Not classified
Substances and mixtures, which in contact with water, emit flammable gases	Not applicable
Oxidizing liquids	Not classified
Oxidizing solids	Classification not possible
Organic peroxides	Not classified
Corrosive to metals	Classification not possible

Health Hazards

Acute toxicity (oral)	Category 5
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation: gas)	Not classified
Acute toxicity (inhalation: vapour)	Not classified
Acute toxicity (inhalation: dust, mist)	Classification not possible
Skin corrosion / irritation	Category 3
Serious eye damage / eye irritation	Category 2A
Respiratory/skin sensitizer	Classification not possible
Germ cell mutagenicity	Classification not possible

Carcinogenicity	Classification not possible
Toxic to reproduction	Classification not possible
Specific target organs/systemic toxicity following single exposure	Classification not possible
Specific target organs/systemic toxicity following repeated exposure	Classification not possible
Aspiration hazard	Classification not possible

Environmental Hazards

Hazardous to the aquatic environment (acute)	Not applicable
Hazardous to the aquatic environment (chronic)	Not applicable

GHS Symbol**Signal word**

Warning

Hazard statements

- H303 May be harmful if swallowed
- H316 Causes mild skin irritation
- H319 Causes serious eye irritation

Precautionary Statements

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P264 Wash hand and face, etc. thoroughly after handling.

Response Statements

- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.

Storage Statements

None

Disposal Statements

None

Section 3 - Composition / Information on Ingredients

Chemical Name	CAS #	UN #	Percent
Citric acid anhydrous	77-92-9	Not applicable	99.5% min. (as anhydrous)

Section 4 - First Aid Measures

Eyes	Immediately flush eyes with copious amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Consult with ophthalmologist.
Skin	Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Consult with a physician if symptoms occur.
Ingestion	Immediately wash mouth with plenty of water and give 1 - 2 cupfuls of milk or water if victim is conscious and alert. Consult with a physician. Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Consult with a physician.

Section 5 - Fire Fighting Measures

Flash Point	No data found	Autoignition	None
Explosion Limits	Lower No data found	Upper	No data found
Extinguishing Media	Water, powder, carbon dioxide or foam		
Fire Fighting Instructions	Avoid non-fire fighting equipped personnel to enter. Extinguish upwind from the fire wearing appropriate protective gear.		

Section 6 - Accidental Release Measures

Spills/Leaks	Evacuate spill area. Provide adequate ventilation. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Do not contact with skin. Do not inhale. Wash spill site after material pickup is complete.
---------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Section 7 - Handling and Storage

Handling	Wear appropriate protective gear. Do not contact with eyes, skin and on clothing. Do not inhale. Handle with care. Wash mouth and hand after handling the material.
Storage	Keep container tightly closed. Avoid such conditions as direct sunlight and high piling. Store in low-humid and dry area.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls	Facilities storing or utilizing the material should be equipped with an eye wash facilities and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits	Not data found
Personal Protective Equipment	
Eyes	Safety goggles
Skin	Rubber gloves
Clothing	Protective clothing and rubber boots
Respirators	Anti-dust mask

Section 9 - Physical and Chemical Properties

Physical State	Crystal, granular, lump or powder
Appearance	Colorless, transparent or white

Odor	None
Boiling point	No data found
Melting point	152-154°C
Density	1.665 at 25°C
Viscosity	No data found
pH	No data found
Flash Point	No data found
Autoignition	None
Explosibility	None
Vapor Pressure	No data found
Vapor Density	No data found
Solubility	Soluble in water 145g/100 ml at 20°C Easily soluble in ethanol, acetone, hardly in ether
Molecular Weight	192.12

Section 10 - Stability and Reactivity

Stability	Wether in dried air, alkali solution in general.
Conditions to avoid	Direct sunlight, high temperature, high humidity and high piling
Incompatibilites with Other Material	Metals, strong oxidizing agents, strong reducing agents, strong bases, metal nitrates
Hazardous Decomposition Products	Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide
Hazardous Polymerization	Will not occur

Section 11 - Toxicological Information

RTECS #	No data found
LD50/LC50	(as anhydrous) oral-rat LD50: 3000 mg/kg oral-mouse LD50: 5040 mg/kg
Carcinogenicity	No data found
Mutagenicity	No data found
Reproductive Effects	No data found
Teratogenicity	No data found
Immunology	No data found
Irritation	(as anhydrous) skin-rabbit: 500 mg 24 hr mild eye-rabbit: 750 µg 24 hr sev.

Section 12 - Ecological Information

Ecotoxicity	No data found
Environmental Standard	No data found

Section 13 - Disposal Consideration

Disposal Method	Federal (national), state or local laws and regulations will determine the proper waste disposal method.
Regulations	Federal (national), state or local laws and regulations

Section 14 - Transport Information

Shipping Name	Not applicable
Hazard Class	Not applicable

UN # Not applicable
Packing Group Not applicable

Section 15 - Regulatory Information

United States	TSCA	Not on the list
EC	EINECS	201-069-1
	R Phrases	No data found
	S Phrases	No data found
Canada	WHMIS	Classification E
Japan	PRTR Law	Not on the list

Section 16 - Other Information

MSDS Creation Date	January 31, 2001
Revised Date	March 01, 2011
Revised No.	Revised 3rd
MSDS No.	G1506

This 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 Showa Kako be liable for any claims, losses, or damage of any third party or for lost profits or any special, incidental, consequential or exemplary damages, howsoever arising, even if Showa Kako has been advised of the possibility of such damages.