Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

1. Identification

(a) Product identifier

Product name: Citric acid

(b) Other means of identification

Product description: No information available

(c) Recommended use of the chemical and restrictions on use

Recommended use:

Restriction on use: No information available.

(d) Details of the supplier of the product

Company name: COFCO BIOCHEMICAL (THAILAND) CO.,LTD

Address: COFCO Factory address:
263 MOO 11T.NONGBUA A.BANKHAI RAYONG 21120THAILAND
COFCO BANGKOK Office address:
184/8, 11 FLOORFORUME TOWER, RATCHADAPISEK ROAD, HUAYKUANG, BANGKOK
THAILAND 10310

Telephone: 66(0)2 6923243
66(0)38 962088

Fax: 66(0)2 6923131
66(0)38 962089

(e) Emergency phone number

215-259-5059

2. Hazard(s) identification

(a) Classification of the chemical

Skin Corrosion/Irritation 2（H315）
Serious Eye Damage/Eye Irritation Category 2 (H319)
Specific Target Organ Toxicity –Single Exposure Category 3 (H335)

(b) Label elements

Pictogram(s):

Signal word: Warning.

Hazard statements: Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary statements:

Prevention: Wash contacted area thoroughly after handling.

	Wear protective gloves
	Wear eye protection/face protection.
	Avoid breathing dust/fume/gas/mist/ vapors/spray.
	Use only outdoors or in a well-ventilated area.
Response	If on skin: Wash with plenty of Water.
	Take off contaminated clothing and wash it before reuse.
	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	If eye irritation persists: Get medical advice/attention.
	If inhaled: Remove person to fresh air and keep comfortable for breathing.
	Call a poison center/doctor if you feel unwell.
Storage	Store in a well-ventilated place. Keep container tightly closed.
	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

(c) Description of any hazards not otherwise classified

No information available.

(d) Ingredient with unknown acute toxicity

No data available

3. Composition/information on ingredients

(a) Substance information

Chemical name:	Citric Acid
Common name and synonyms:	2-Hydroxy-1,2,3-propanetricarboxylic acid
CAS number and other unique identifiers:	77-92-9
Molecular Weight:	192.12
Chemical Formula:	H3C6H5O7
Concentration:	99 - 100%
Hazardous impurities and stabilizing additives:	≤1%

4. First-aid measures

(a) Description of first aid measures

Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
Ingestion:	Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

(b) Most important symptoms/effects, acute and delayed

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

(c) Immediate medical attention and special treatment

Persons with pre-existing skin, eye, or respiratory disease may be at increased risk from the irritant or allergic properties of this material. Attending physician should treat exposed patients symptomatically.

5. Fire-fighting measures

(a) Extinguishing media

Suitable extinguishing media:	Water spray, dry chemical, alcohol foam, or carbon dioxide.
Unsuitable extinguishing media:	No information available.

(b) Special hazards arising from the chemical

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

(c) Special protective equipment and precautions for fire-fighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental release measures

(a) Personal precautions, protective equipment and emergency procedures

Ventilate area of leak or spill.Remove all sources of ignition. Do not breathe in granules. Avoid contact with skin, eyes and clothing.

(b) Methods and materials for containment and cleaning up

Seal leak. Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

7. Handling and storage

(a) Precautions for safe handling

Use only in well-ventilated areas. Keep container tightly closed. Do not use unlabelled containers. Avoid contact with skin and eyes. Do not breathe in granules.

Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

(b) Conditions for safe storage, including any incompatibilities

Keep in a tightly closed container, stored in a cool, dry, ventilated area.

8. Exposure controls/personal protection

(a) Control parameters

	OSHA		NIOSH	
Component	**PEL-TWA**	**PEL-STEL**	**REL-TWA**	**REL-STEL**
Citric Acid	None established.		None established.	

(b) Appropriate engineering controls

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

(c) Personal protective equipment

Respiratory protection: For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Hand protection: Wear appropriate gloves when handling.

Eye/face protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin/body protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

9. Physical and chemical properties

(a) Appearance	White granules.
(b) Odor	Odorless
(c) Odor threshold	Not available.
(d) pH	2.2 (0.1 N sol)
(e) Melting point/freezing point	153℃ (307℉)
(f) Initial boiling point and boiling range	No boiling point is available due to substance decomposition.
(g) Flash point	345 °C
(h) Evaporation rate	Not available.
(i) Flammability	Not available.
(j) Upper/lower flammability or explosive limits	Not available.
(k) Vapor pressure	Not available.
(l) Vapor density	Not available.
(m) Relative density	1.665 @ 20℃/4℃
(n) Solubility(ies)	ca. 60 g/100 ml @ 20℃(Anhydrous)
(o) Partition coefficient: n-octanol/water	Not available.
(p) Auto-ignition temperature	Not available.

(q) Decomposition temperature	Not available.
(r) Viscosity	Not available.
(s)% Volatiles by volume @ 21C (70F):	0

10. Stability and reactivity

(a) Reactivity

Stable under recommended storage and handling conditions (see section 7, handling and storage).

(b) Chemical stability

Stable under ordinary conditions of use and storage.

(c) Possibility of hazardous reactions

Hazardous polymerization will not occur.

(d) Conditions to avoid

Heat, flames, ignition sources and incompatibles.

(e) Incompatible materials

Metal nitrates (potentially explosive reaction), alkali carbonates and bicarbonates, potassium tartrate. Will corrode copper, zinc, aluminum and their alloys.

(f) Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO2).

11. Toxicological information

(a) Information on the likely routes of exposure

Inhalation:	Irritating.
Ingestion:	Irritating.
Skin contact:	Irritating.
Eye contact:	Irritating.

(b) Information on toxicological characteristics

Acute toxicity:	Oral: LD50=5400 mg/kg bw (mouse) Dermal: LD50> 2000 mg/kg bw(rat)
Skin corrosion/irritation:	Causes skin irritation.
Serious eye damage/irritation:	Causes serious eye irritation.
Respiratory sensitization:	No data available.
skin sensitization:	No data available.
Carcinogenicity:	Not classified
Germ Cell Mutagenicity:	No data available.
Reproductive Toxicity:	No data available.
STOT-Single Exposure:	May cause respiratory irritation.
STOT-Repeated Exposure:	No data available.
Aspiration Hazard:	No data available.

12. Ecological information

(a) Ecotoxicity

No data available.

(b) Persistence and Degradability

Based on best current information, there is no data known associated with this product.

(c) Bioaccumulative potential

Based on best current information, there is no data known associated with this product.

(d) Mobility in soil

Based on best current information, there is no data known associated with this product.

(e) Other adverse effects

No information available.

13. Disposal considerations

(a) Safe handling and methods of disposal

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport information

(a) UN number	Not regulated
(b) UN Proper shipping name	Not regulated
(c) Transport hazard class(es)	Not regulated
(d) Packing group (if applicable)	Not regulated
(e) Marine pollutant (Yes/No)	Not regulated
(f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	Not regulated
(g) Special precautions	Not regulated

15. Regulatory information

(a) Safety, health and environmental regulations specific for the product in question

CAS No.	USA TSCA	EU EINECS	Korea ECL	China IECSC	Canada DSL
77-92-9	Listed	Listed	Listed	Listed	Listed
Remark: The above-mentioned search results are based on the Non-Confidential Inventory.					

16. Other information, including date of preparation or last revision

(a) Preparation and revision information

Date of previous revision: Not applicable. Date of this revision: 01/01/2018

Revision summary: The first New SDS

(b) Abbreviations and acronyms

NIOSH	The National Institute for Occupational Safety and Health
OSHA	The United States Occupational Safety and Health Administration.
TWA	time-weighted average
STEL	Short term exposure limit
TSCA	Toxic Substances Control Act, The American chemical inventory.
DSL	Domestic Substances List
EINECS	European Inventory of Existing Commercial chemical Substances
ECL	Existing Chemicals List, the Korean chemical inventory.
IECSC	Inventory of existing chemical substances in China.

(c) Disclaimer

The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

---------- End of the SDS ----------