

SAFETY DATA SHEET

ITACONIC ACID

Version 1.0

Issue date: 15/06/2016

Revision date: 15/06/2016

SDS Record Number: CSSS-TCO-010-120148

1. Identification

GHS product identifier: ITACONIC ACID
Identification of the product: See section 3
Recommended use: General chemical additives. Used for paper coating, plastic film, paint additives and etc.
Recommended Restrictions: Not available
Details of the supplier of the safety data sheet:
Supplier(Manufacturer): ZHEJIANG GUOGUANG BIOCHEMISTRY CO., LTD.
Address: NO.6, CHUNCHENG ROAD, KECHENG DISTRICT, QUZHOU CITY, ZHEJIANG PROVINCE, P.R.CHINA, 324004.
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Emergency number: +86-570-8610536

2. Hazards identification

GHS classification:

Physical hazards: Not classified
Health hazards: Acute toxicity, oral Category 5
Serious eye damage / eye irritation Category 1
Environmental hazards: Not classified

GHS label elements:

Hazard Pictograms :



Signal word: Danger
Hazard statement: May be harmful if swallowed.
Causes serious eye damage.

Precautionary statement:

Prevention: Wear protective gloves/protective clothing/eye protection/face protection.
Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

Storage: Not applicable

Disposal: Dispose of contents/container to local regulations.

Specific hazards: Not applicable

3. Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	CAS No.	EC No.	Concentration
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ITACONIC ACID	97-65-4	202-599-6	99-100%
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4. First aid measures

Description of necessary first-aid measures:

Inhalation:	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
Skin:	Immediately wash with water and soap and rinse thoroughly. If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.
Eye:	Rinse opened eye for several minutes under running water. Then consult a doctor.
Ingestion:	Seek immediate medical advice. Rinse the mouth with water.
Most important symptoms and effects, both acute and delayed:	May be harmful if swallowed. Causes serious eye damage.
Indication of immediate medical attention and special treatment needed, if necessary:	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media:	CO ₂ , powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Unsuitable extinguishing media:	Not available.
Specific hazards arising from the chemical:	A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.
Protective equipment and precautions for firefighters:	Protective equipment for fire-fighters, Self-contained breathing apparatus. Use air-supplied respirator, gloves and protective goggles.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Avoid any contact with the skin and eyes. Avoid inhaling dust. If a large quantity has been spilt, evacuate all personnel and only allow intervention by trained operators equipped with safety apparatus.
Environmental precautions:	Prevent any material from entering drains or waterways. Do not allow to enter sewers/ surface or ground water.
Methods and materials for containment and cleaning up:	Retrieve the product by mechanical means (sweeping/vacuuming): do not generate dust.

7. Handling and storage

Precautions for safe handling:	Wash thoroughly after handling. Use with adequate ventilation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Store protected from light.
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Conditions for safe storage, including any incompatibilities: Requirements to be met by storerooms and receptacles: Keep the container tightly closed in a dry, well-ventilated place. Always keep in packaging made of an identical material to the original. Information about storage in one common storage facility: Not required. Further information about storage conditions: None. Storage class: VCI. Keep away from incompatible substances(see section 10), any sources of ignition or heat(e.g. open flames, direct sunlight, smoking, hot surfaces), food, drink and feedstuffs. Protect from humidity and water. Inspect regularly for deficiencies such as damage or leaks.

8. Exposure controls/personal protection

Control parameters:

Occupational exposure limits: Not available.

Appropriate 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.

Personal protective equipment:

Eye/face protection: Tightly sealed goggles.

Skin protection: Wear protective clothing against solid chemicals and particles suspended in the air (type 5) in accordance with standard EN13982-1 to prevent skin contact.

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation. When workers are confronted with concentrations that are above occupational exposure limits, they must wear a suitable, approved, respiratory protection device. Type of FFP mask: Wear a disposable half-mask dust filter in accordance with standard EN149. Category:FFP1
Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387: A1 (Brown).

Hand protection: Wear suitable protective gloves in the event of prolonged or repeated skin contact. Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374. Recommended properties: Impervious gloves in accordance with standard EN374
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer
Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

9. Physical and chemical properties

Appearance:

Physical state: Solid

Form: Crystalline

Color: White

Odor: Characteristic odor

Odour threshold: Not available

PH: Not available

Melting point/Freezing point: 163-168.4 °C(1013.25 hPa)

Initial boiling point and boiling range: Not available

Flash point: Not available

Evaporation rate: Not available

Flammability (solid, gas) : Non flammable

Upper/lower flammability or explosive Not available

limits:	
Vapor pressure:	0.000000115 hPa (20°C)
Vapor density:	Not available
Relative density:	0.893 g/cm ³ (pour density) (25°C)
Solubility (H₂O) :	ca. 77.49 g/L at 20°C
Partition coefficient (n-octanol/water) :	log Pow=ca. -0.301(20 °C)
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Molecular weight:	130.1
Molecular formula:	C ₅ H ₆ O ₄
Viscosity:	Not available
Specific gravity:	Not available

10. Stability and reactivity

Reactivity:	The substance is stable under normal storage and handling conditions.
Chemical stability:	Material is stable under normal conditions
Possibility of hazardous reactions:	No dangerous reaction known under conditions of normal use.
Conditions to avoid:	Contact with incompatible materials. Avoid formation of dusts. Dusts can form an explosive mixture with air.
Incompatible materials:	Oxidising agents, Reducing agents, Bases.
Hazardous decomposition products:	Carbon monoxide (CO), carbon dioxide (CO ₂).

11. Toxicological information

Toxicological data:	
Toxicological information:	Occupational exposure to the substance or mixture may cause adverse effects.
Acute toxicity:	
LD50(Oral, Rat):	2969 mg/kg bw
LD50(Dermal, Rabbit):	Not available.
LC50(Inhalation, Rat):	Not available.
Skin corrosion/Irritation:	Not classified
Serious eye damage/irritation:	Causes serious eye damage.
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified
Other information	Not classified

12. Ecological information

Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	N/A	96h	Fish	OECD 203	N/A	N/A
EC50	N/A	48h	Daphnia	OECD 202	N/A	N/A
EC50	N/A	72h	Algae	OECD 201	N/A	N/A

Persistence and degradability:	Readily biodegradable.
Bioaccumulative potential:	No data available.
Mobility in soil:	No data available.
Other adverse effects:	No data available.

13. Disposal considerations

Disposal methods:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Waste from residues/unused products:	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging:	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

	Land transport(ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	Not regulated	Not regulated	Not regulated
UN Proper shipping name	Not regulated	Not regulated	Not regulated
Transport hazard Class	Not regulated	Not regulated	Not regulated
Packaging group	Not regulated	Not regulated	Not regulated
Environmental hazards	No	No	No
Special precautions for user	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not regulated	Not regulated	Not regulated

15. Regulatory information

Inventory status:

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Indication of changes: Version 1.0 Amended by GHS rev 4

Training instructions: Not applicable.

Further information: This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Notice to reader: Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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