

Safety Data Sheet: Itaconic Acid

1. Identification

Product	Itaconic Acid; CAS 97-65-4; EC 202-599-6
Use	Professional polymer, coating, resin and intermediate manufacturing.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Itaconic Acid. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Serious eye damage Category 1.
Signal word / symbols	Danger; GHS05
Hazard statements	H318: Causes serious eye damage.
Prevention	Control dust with effective local ventilation. Wear chemical-resistant gloves, suitable work clothing and chemical splash goggles; keep eyewash available. Avoid breathing dust and all eye contact.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Itaconic acid, CAS 97-65-4, EC 202-599-6. Selected solid-substance reference range 95–100%; supply purity ≥99.6%. Reference ranges do not establish a measured supplied-batch impurity composition.
Supply grade	Purity ≥99.6%
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant.
Inhalation	Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to dust.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Seek medical advice for persistent irritation.
Eyes	Immediately rinse with plenty of water for at least 15 minutes. Remove contact lenses if easy and continue rinsing. Obtain urgent medical or ophthalmological assistance.
Ingestion	Do not induce vomiting. Rinse mouth if conscious and obtain medical advice. Never give anything orally to an unconscious person.
Effects / treatment	Dust or direct contact can cause serious eye injury. Avoid airborne powder and unnecessary exposure; obtain immediate medical assistance after eye contact. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Use water spray, foam, dry chemical or carbon dioxide suited to the surrounding fire.
Hazards	Combustible organic material. Heating can cause decomposition and fire can release carbon oxides; dispersed fine dust can form explosive mixtures in air.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personal protection	Control dust with effective local ventilation. Wear chemical-resistant gloves, suitable work clothing and chemical splash goggles; keep eyewash available. Avoid breathing dust and all eye contact.
Containment	Collect powder carefully with a low-dust procedure into labelled closed containers. Do not blow or sweep dry dust into the air.
Environment	Keep material out of drains and waterways. Use an approved waste-disposal route.

7. Handling and Storage

Handling	Control dust with effective local ventilation. Wear chemical-resistant gloves, suitable work clothing and chemical splash goggles; keep eyewash available. Avoid breathing dust and all eye contact.
Storage	Store in tightly closed original bags in a cool, dry, ventilated place. Protect from moisture, direct sunlight and rain; segregate from strong alkalis and oxidizers.
Incompatibilities	Strong alkalis and strong oxidizers; moisture and contamination.

8. Exposure Controls / Personal Protection

Exposure limits	No ingredient-specific numerical workplace exposure limit is identified in the selected reference. Control airborne dust and apply local workplace requirements.
Engineering controls	Use local extraction where dust can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	White crystals or powder
Formula / molecular weight	C5H6O4 / 130.10 g/mol
Physical state	White crystalline solid
Melting range	165–168°C
Density, reference at 25°C	1.573 g/cm3
pH, reference in 10 g/L water at 20°C	Approximately 2
Water solubility, reference at 20°C	77.49 g/L
Thermal decomposition, reference	Approximately 268°C
Other properties	Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred.

10. Stability and Reactivity

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	Strong alkalis and strong oxidizers; moisture and contamination.
Decomposition	Combustible organic material. Heating can cause decomposition and fire can release carbon oxides; dispersed fine dust can form explosive mixtures in air.

11. Toxicological Information

Exposure effects	Dust or direct contact can cause serious eye injury. Avoid airborne powder and unnecessary exposure; obtain immediate medical assistance after eye contact.
Reference classification	Serious eye damage Category 1.
Data limits	Reference rat oral LD50 >2,000 mg/kg. Serious eye damage is the classified hazard. The reference skin test showed no irritation, sensitization test was negative and bacterial mutagenicity test was negative; these results are not supplied-batch tests or a complete chronic assessment.

12. Ecological Information

Environmental effects	Selected reference fish LC50 190 mg/L over 24 hours, Daphnia EC50 240 mg/L over 24 hours and algal IC50 47 mg/L over 72 hours. Reference biodegradation 100% over 28 days; log Pow approximately –0.4. Prevent uncontrolled release.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Non-dangerous goods
UN number	Not assigned
Shipping name	Not regulated as dangerous goods
Class / packing group	Road / rail, IMDG and IATA: non-dangerous goods for the matching solid substance; no UN number or packing group assigned.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Itaconic Acid; CAS 97-65-4; EC 202-599-6
HS reference	291719; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished formulation.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H318: Causes serious eye damage.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.1; prepared 2026-10-07. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

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