

Itaconic Acid MSDS

1. Product Name and Identification

Product Name: [Itaconic Acid](#)

Synonyms: Methylsuccinic Acid, 2-Methylidenebutanedioic Acid

Chemical Formula: C₅H₆O₄

CAS Number: 97-65-4

Recommended Use: Used in the production of resins, plastics, adhesives, and coatings; chemical intermediate

Manufacturer/Supplier Contact Information:

- Address: [Insert specific address]
 - Emergency Phone Number: [Insert appropriate phone number]
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2. Composition/Ingredients

Chemical Composition:

- **Substance Name:** Itaconic Acid
 - **Concentration:** ≥99%
 - **CAS Number:** 97-65-4
 - **Additional Information:** No additional hazardous components identified.
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3. Hazards Identification

Hazard Classification:

- Eye irritation (Category 2A)
- Skin irritation (Category 2)
- Specific target organ toxicity (Category 3, respiratory irritation)

GHS Label Elements:

- **Pictograms:**
![Exclamation Mark]
- **Signal Word:** Warning
- **Hazard Statements:**
 - H319 Causes serious eye irritation.
 - H315 Causes skin irritation.

- H335 May cause respiratory irritation.
 - **Precautionary Statements:**
 - Avoid breathing dust or fumes.
 - Wash hands thoroughly after handling.
 - Wear protective gloves, clothing, and eye/face protection.
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4. First Aid Measures

General Advice: If any symptoms occur or persist after exposure, seek medical attention.

Eye Contact: Flush eyes cautiously with plenty of water for 15 minutes. Remove contact lenses if present and easy to do. Seek medical attention if symptoms persist.

Skin Contact: Wash affected area with soap and water. Remove and wash contaminated clothing. If skin irritation occurs, seek medical attention.

Inhalation: Move the individual to fresh air immediately. Seek medical attention if breathing difficulties develop.

Ingestion: Rinse mouth with water. Do not induce vomiting. Call a physician for further instructions.

5. Handling and Storage

Handling:

- Avoid inhalation of dust and contact with skin and eyes.
- Ensure good ventilation or use local exhaust to reduce dust exposure.
- Practice good hygiene by washing hands and exposed skin thoroughly after handling.

Storage:

- Store in a cool, dry, well-ventilated area.
 - Keep the container tightly closed. Prevent exposure to excessive heat or moisture.
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6. Exposure Controls/Personal Protection

Exposure Limits:

- No specific exposure limits established by OSHA or ACGIH. Handle with care to minimize exposure.

Engineering Controls:

- Use proper ventilation systems to maintain airborne concentrations below permissible limits.

Personal Protective Equipment (PPE):

- **Eye Protection:** Safety goggles or glasses with side shields.
 - **Skin Protection:** Chemical-resistant gloves and protective clothing.
 - **Respiratory Protection:** NIOSH-approved dust mask or respirator if adequate ventilation is not available.
 - **Hygiene Measures:** Wash thoroughly after handling, particularly before eating, drinking, or smoking.
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7. Physical and Chemical Properties

- **Appearance:** White crystalline powder
 - **Odor:** Odorless
 - **Odor Threshold:** Not applicable
 - **pH:** 2.2 (1% solution at 25°C)
 - **Melting Point/Freezing Point:** 166–168°C (331–334°F)
 - **Boiling Point:** Decomposes before boiling
 - **Flash Point:** Not applicable
 - **Flammability:** Not classified as flammable
 - **Vapor Pressure:** Negligible
 - **Vapor Density:** Not applicable
 - **Relative Density:** 1.632 g/cm³ at 25°C
 - **Solubility in Water:** 83 g/L at 20°C
 - **Partition Coefficient (n-octanol/water):** -1.3
 - **Auto-Ignition Temperature:** Not applicable
 - **Decomposition Temperature:** >170°C
 - **Viscosity:** Not applicable
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8. Stability and Reactivity

Stability: Stable under normal storage and handling conditions.

Hazardous Reactions: None expected under normal use.

Conditions to Avoid: Excessive heat, open flames, and high humidity.

Materials to Avoid: Strong acids, bases, and oxidizing agents.

Hazardous Decomposition Products: Thermal decomposition may produce carbon oxides (CO, CO₂).

9. Toxicological Information

Acute Toxicity:

- **Oral LD50 (Rat):** >2,000 mg/kg (relatively low toxicity)

Skin Corrosion/Irritation: Causes skin irritation on direct contact.

Eye Damage/Irritation: Causes moderate to severe eye irritation.

Respiratory Sensitization: May cause irritation to respiratory tract if inhaled as dust.

Carcinogenicity: Not classified as carcinogenic per IARC, NTP, or OSHA.

Other Information: Prolonged or repeated exposure may aggravate conditions of the skin, eyes, or respiratory system.

10. Disposal Considerations

Waste Management: Dispose of product in accordance with local, state, and federal waste disposal regulations.

Recommendation: Prevent entry into sewers, drains, or waterways. Dispose of through a licensed waste disposal contractor.

Packaging Disposal: Containers should not be reused. Dispose of containers following applicable regulations.
