

# Purified Terephthalic Acid MSDS

## 1. Product Name and Identification

**Product Name:** [Purified Terephthalic Acid \(PTA\)](#)

**Synonyms:** 1,4-Benzenedicarboxylic Acid, Terephthalic Acid

**CAS Number:** 100-21-0

**Molecular Formula:** C<sub>8</sub>H<sub>6</sub>O<sub>4</sub>

**Manufacturer's Name:** [Fill in as Applicable]

**Emergency Contact:** [Fill in Emergency Number]

## 2. Composition/Ingredients

- **Chemical Name:** Purified Terephthalic Acid
- **CAS Number:** 100-21-0
- **Purity:** ≥ 99.9%
- **EC Number:** 202-830-0
- **Hazardous Components:** None beyond standard regulatory thresholds.

## 3. Hazards Identification

### Classification:

- Not classified as a hazardous substance under GHS guidelines.
- May cause irritation to eyes, skin, or respiratory tract when improperly handled.

### Label Elements:

- **Signal Word:** Warning
- **Hazard Statements:**
  - May cause mild eye and skin irritation.
  - Dust or fine particles may irritate respiratory system.
- **Precautionary Statements:**
  - Avoid creating or breathing dust.
  - Handle with proper personal protective equipment.

### Potential Health Effects:

- **Eye Contact:** May cause temporary redness or irritation.
- **Skin Contact:** Prolonged contact can result in dryness or mild irritation.
- **Inhalation:** Dust may irritate the respiratory system if inhaled.
- **Ingestion:** Low toxicity if ingested in small amounts; may cause gastrointestinal discomfort.

## 4. First Aid Measures

**Eyes:** Rinse thoroughly with water for several minutes. Remove contact lenses if possible. Seek medical advice if symptoms persist.

**Skin:** Wash affected area with soap and water. Remove contaminated clothing. Seek medical advice if irritation develops.

**Inhalation:** Move the person to fresh air. If breathing difficulty occurs, seek medical attention.

**Ingestion:** Rinse mouth thoroughly with water. If discomfort persists, consult a physician.

## 5. Handling and Storage

### Handling:

- Minimize dust creation and accumulation.
- Use proper ventilation to prevent inhalation of particles.
- Avoid direct contact with eyes and skin.

### Storage:

- Store in a cool, dry, well-ventilated area.
- Keep container tightly sealed to prevent moisture absorption.
- Avoid contact with strong oxidizing agents.

## 6. Exposure Controls/Personal Protection

### Exposure Limits:

- Occupational exposure limits have not been established for purified terephthalic acid. Minimize exposure by following safe handling guidelines.

### Engineering Controls:

- Utilize local exhaust ventilation to control dust levels below recommended concentrations.

### Personal Protective Equipment (PPE):

- **Eye Protection:** Safety goggles or glasses with side shields.
- **Skin Protection:** Gloves suitable for chemical handling.
- **Respiratory Protection:** Dust masks or respirators when handling in poorly ventilated areas.
- **Hygiene Measures:** Wash hands thoroughly after use. Do not eat, drink, or smoke in processing areas.

## 7. Physical and Chemical Properties

- **Appearance:** White crystalline powder
- **Odor:** Odorless
- **Melting Point:** 300°C (572°F) (sublimes)
- **Boiling Point:** Not applicable (decomposes on heating)
- **Solubility in Water:** Poor (< 20 mg/L at 20°C)
- **Density:** Approximately 1.5 g/cm<sup>3</sup> at 25°C
- **Vapor Pressure:** Negligible
- **pH (suspension in water):** ~4 at 20°C

## 8. Stability and Reactivity

**Stability:** Stable under normal conditions of handling and storage.

**Hazardous Reactions:** None expected under normal use.

**Conditions to Avoid:** Excessive dust accumulation, strong oxidizing agents, and high temperatures.

**Incompatible Materials:** Strong oxidizers.

**Hazardous Decomposition Products:** Carbon dioxide and carbon monoxide may form when heated to decomposition.

## 9. Toxicological Information

**Acute Toxicity:**

- **Oral (LD50):** > 10,000 mg/kg (rat)
- **Dermal:** Not classified as acutely toxic.

**Chronic Toxicity:** Not classified as hazardous under chronic exposure.

**Routes of Exposure:** Skin and eye contact, inhalation of dust, incidental ingestion.

**Symptoms of Overexposure:** Irritation of eyes, skin, or respiratory tract. Symptoms generally resolve upon cessation of exposure.

## 10. Disposal Considerations

**Waste Disposal:**

- Dispose of in accordance with local, national, and regional regulations.
- Avoid release to the environment. Do not pour into drains or sewers.

**Empty Containers:** Ensure containers are empty and clean before disposal. Follow regulatory guidelines for recycling or disposal.

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