

Trioctyl Trimellitate (TOTM) MSDS

Product Name and Identification

Product Name: [Trioctyl Trimellitate \(TOTM\)](#)

Chemical Formula: C₃₃H₅₄O₆

CAS Number: 3319-31-1

Intended Use: Plasticizer for PVC and other polymers, industrial applications requiring high-temperature resistance and low volatility.

Composition/Ingredients

Chemical Composition:

- **Substance Name:** Trioctyl Trimellitate
- **Purity:** ≥ 99%
- **Hazardous Components:** No hazardous components under current regulatory classifications.

Hazards Identification

Emergency Overview:

- **Physical Hazards:**
 - Combustible at high temperatures.
 - May generate fumes upon decomposition.
- **Health Hazards:**
 - May cause mild irritation to eyes, skin, and respiratory tract.
 - Prolonged exposure may cause discomfort.
- **Environmental Hazards:**
 - Avoid uncontrolled release into the environment; potential to harm aquatic systems in large quantities.

Precautionary Statements:

- Avoid breathing fumes or mist.
- Wear appropriate personal protective equipment.
- Keep away from heat sources or open flames.

First Aid Measures

Eye Contact:

- Flush eyes with water for at least 15 minutes, keeping eyelids open. Remove contact lenses if present and safe to do so. Seek medical attention if symptoms persist.

Skin Contact:

- Wash the affected area thoroughly with soap and water. Remove contaminated clothing and footwear. Seek medical advice if irritation develops or persists.

Inhalation:

- Move to an area with fresh air. If breathing difficulties occur, consult a physician immediately.

Ingestion:

- Rinse mouth with water. Do not induce vomiting unless directed by medical personnel. Seek immediate medical assistance.

Handling and Storage

Handling:

- Use in a well-ventilated workplace. Avoid inhaling vapor or mist.
- Wear protective clothing and minimize contact with skin and eyes.
- Keep containers closed when not in use.

Storage:

- Store in a cool, well-ventilated area away from heat and direct sunlight.
- Keep away from strong oxidizing agents and ignition sources.

Exposure Controls/Personal Protection

Exposure Limits:

- No specific occupational exposure limits established, but minimize prolonged exposure.

Engineering Controls:

- Install proper ventilation or exhaust systems to reduce exposure to vapors/mists.

Personal Protective Equipment (PPE):

- **Eye Protection:** Safety goggles or face shield.
- **Skin Protection:** Chemical-resistant gloves and appropriate protective clothing.

- **Respiratory Protection:** Use a respirator in poorly ventilated areas or when handling large quantities.

Physical and Chemical Properties

- **Appearance:** Clear, colorless to pale yellow liquid
- **Odor:** Slight characteristic odor
- **Melting Point:** -48°C
- **Boiling Point:** $\approx 500^{\circ}\text{C}$ at atmospheric pressure
- **Flash Point:** $> 235^{\circ}\text{C}$ (closed cup)
- **Solubility:** Insoluble in water; soluble in most organic solvents
- **Vapor Pressure:** < 0.01 mmHg at 20°C
- **Density:** ≈ 0.99 g/cm³ at 20°C

Stability and Reactivity

Chemical Stability:

- Stable under recommended storage and handling conditions.

Reactivity:

- No dangerous reactions under normal use conditions.

Conditions to Avoid:

- Elevated temperatures, open flames, and oxidizing conditions.

Hazardous Decomposition Products:

- Thermal decomposition may produce carbon dioxide, carbon monoxide, and other organic compounds.

Toxicological Information

- **Acute Toxicity:**
 - Low acute oral toxicity ($\text{LD}_{50} > 5,000$ mg/kg, rat).
 - Potential for skin and eye irritation with prolonged exposure.
- **Skin/Eye Irritation:**
 - May cause slight irritation upon prolonged or repeated contact.
- **Chronic Effects:**
 - No known chronic health effects at standard exposure levels.
- **Carcinogenic Status:**
 - Not classified as carcinogenic by IARC, OSHA, or NTP.

Disposal Considerations

- Dispose of waste material and any contaminated packaging in accordance with local, regional, and national regulations.
- Avoid releasing material into drains, waterways, or soil.
- Consult waste handling experts if disposal questions arise.

Note: The information in this document is based on the current understanding of the product. Always consult relevant regulations and guidelines to ensure proper handling and safety procedures.