

Diisodecyl Phthalate (DPHP) MSDS

Product Name and Identification

Product Name: [Diisodecyl Phthalate \(DPHP\)](#)

Chemical Formula: C₂₈H₄₆O₄

CAS Number: 68515-49-1

Intended Use: Primarily used as a plasticizer in flexible plastics, cable insulation, and industrial applications requiring durability and resistance to aging.

Composition/Ingredients

Chemical Composition:

- **Substance Name:** Diisodecyl Phthalate
- **Purity:** ≥ 99%
- **Hazardous Components:** None identified under standard regulatory classifications.

Hazards Identification

Emergency Overview:

- **Physical Hazards:**
 - Non-flammable; may release vapors upon combustion.
- **Health Hazards:**
 - May cause mild irritation upon prolonged skin or eye contact.
 - Inhalation of mist or fumes may cause respiratory discomfort.
- **Environmental Hazards:**
 - Avoid discharge into the environment; potential for bioaccumulation in aquatic systems.

Precautionary Statements:

- Prevent inhalation of vapor, mist, or fumes.
- Ensure use of appropriate protective gear to minimize exposure.
- Avoid uncontrolled release into waterways or soil.

First Aid Measures

Eye Contact:

- Rinse eyes thoroughly with clean water for at least 15 minutes. If irritation persists, consult a healthcare professional.

Skin Contact:

- Wash the affected area thoroughly with soap and water. Remove contaminated clothing. If irritation arises, seek medical advice.

Inhalation:

- Move the affected person to fresh air. If breathing difficulty or discomfort occurs, seek immediate medical attention.

Ingestion:

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

Handling and Storage

Handling:

- Use the product in a well-ventilated area. Avoid generation of mist or excessive inhalation.
- Minimize direct skin and eye contact. Practice good hygiene after handling.

Storage:

- Store in a cool, dry, and well-ventilated location.
- Keep away from strong oxidizing agents and direct sunlight. Ensure containers are tightly sealed to prevent contamination.

Exposure Controls/Personal Protection

Exposure Limits:

- No specific exposure limits established; minimize exposure.

Engineering Controls:

- Maintain effective ventilation, including local exhaust ventilation or proper ventilation systems to limit mist or vapor concentrations.

Personal Protective Equipment (PPE):

- **Eye Protection:** Use safety glasses or chemical-resistant goggles.
- **Skin Protection:** Use chemical-resistant gloves and protective clothing.

- **Respiratory Protection:** Use an approved respirator in poorly ventilated areas or if mist is present.

Physical and Chemical Properties

- **Appearance:** Clear, colorless to pale yellow liquid
- **Odor:** Mild characteristic odor
- **Melting Point:** $< -50^{\circ}\text{C}$
- **Boiling Point:** $> 400^{\circ}\text{C}$
- **Flash Point:** $> 210^{\circ}\text{C}$ (closed cup)
- **Solubility:** Insoluble in water; miscible in organic solvents
- **Vapor Pressure:** Negligible at room temperature
- **Density:** Approximately 0.96 g/cm^3 at 20°C

Stability and Reactivity

Chemical Stability:

- Stable under normal temperature and pressure conditions.

Reactivity:

- Non-reactive under typical use and handling conditions.

Conditions to Avoid:

- Avoid excessive heat, ignition sources, and contact with oxidizers.

Hazardous Decomposition Products:

- May produce carbon monoxide, carbon dioxide, and other organic compounds when exposed to high heat or fire.

Toxicological Information

- **Acute Toxicity:**
 - Oral LD50 (rat): $>10,000\text{ mg/kg}$; very low acute toxicity.
 - Dermal LD50 (rabbit): $>3,000\text{ mg/kg}$; minimal dermal toxicity.
- **Skin/Eye Irritation:**
 - May cause slight irritation upon prolonged or repeated exposure.
- **Chronic Effects:**
 - No significant chronic effects identified under controlled exposure conditions.
- **Carcinogenic Status:**
 - Not classified as carcinogenic under IARC, OSHA, or NTP guidelines.

Disposal Considerations

- Dispose of in accordance with all local, regional, and national regulations.
- Avoid disposal into sewage systems or natural water sources.
- Containers should be thoroughly cleaned prior to recycling or disposal.

Note: The information provided in this document reflects current knowledge and understanding of this product but may require updates as regulations or conditions evolve. Always ensure compliance with local and federal safety standards.