

# Refined Naphthalene MSDS

## 1. Product Name and Identification

**Product Name:** [Refined Naphthalene](#)

**Synonyms:** Naphthalin, Tar Camphor

**Product CAS Number:** 91-20-3

**Recommended Use:** Used in the production of dyes, resins, and insect repellents. Also utilized in the manufacturing of surfactants and lubricants.

**Manufacturer/Distributor:** [Insert Manufacturer Details Here]

**Emergency Contact:** [Insert Emergency Contact Information Here]

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## 2. Composition/Ingredients

**Chemical Name:** Refined Naphthalene

**CAS Number:** 91-20-3

**Chemical Formula:** C<sub>10</sub>H<sub>8</sub>

**Molecular Weight:** 128.17 g/mol

**Percentage Composition:** 100% Refined Naphthalene (in pure form).

**Impurities/Additives:** None reported.

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## 3. Hazards Identification

### Classification of the Substance:

- Flammable Solid (Category 2)
- Acute Toxicity (Oral) (Category 4)
- Acute Toxicity (Dermal) (Category 4)
- Carcinogenicity (Category 2)
- Serious Eye Irritation (Category 2A)

### Label Elements:

- **Signal Word:** Warning
- **Hazard Statements:**
  - H228: Flammable solid.
  - H302 + H312: Harmful if swallowed or in contact with skin.
  - H319: Causes serious eye irritation.
  - H351: Suspected of causing cancer.

## Precautionary Statements:

- **Prevention:**
  - Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
  - Avoid breathing dust or vapors.
  - Wash hands thoroughly after handling.
  - Wear protective gloves, clothing, and eye protection.
- **Response:**
  - **IF ON SKIN (or hair):** Wash with soap and water. Remove contaminated clothing.
  - **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - **IF SWALLOWED:** Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.
- **Storage and Disposal:**
  - Store in a well-ventilated place away from heat sources.
  - Dispose of contents in accordance with local, regional, and federal regulations.

## Other Hazards:

Prolonged exposure to vapors may affect the central nervous system or liver. Dust generation should be avoided as it may form explosive air mixtures.

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## 4. First Aid Measures

### General Advice:

Immediately call for medical attention if symptoms persist and provide this MSDS to the attending physician.

- **Eye Contact:** Rinse eyes cautiously with water for 15 minutes. Seek immediate medical attention if irritation persists.
  - **Skin Contact:** Wash affected areas with soap and water. Remove and wash contaminated clothing. If irritation persists, consult a healthcare professional.
  - **Inhalation:** Remove the individual to fresh air and seek immediate medical attention. Provide oxygen if breathing is difficult.
  - **Ingestion:** Rinse mouth with water. Do not induce vomiting unless explicitly instructed by a healthcare provider. Seek urgent medical advice.
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## 5. Handling and Storage

## Handling:

- Avoid contact with skin, eyes, and clothing.
- Do not inhale vapors or dust.
- Work in a well-ventilated area or use appropriate local exhaust ventilation.
- Keep away from ignitable sources and use spark-proof tools.

## Storage:

- Store in a sealed, labeled container in a cool, dry, and well-ventilated area.
  - Keep away from strong oxidizing agents and incompatible materials.
  - Maintain ambient storage temperatures.
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## 6. Exposure Controls/Personal Protection

### Control Parameters:

- **OSHA PEL:** 10 ppm
- **ACGIH TLV:** 10 ppm (TWA)

### Engineering Controls:

- Use mechanical ventilation or localized exhaust to keep airborne concentrations below permissible exposure limits.
- Install eye wash stations and safety showers near work areas.

### Personal Protective Equipment (PPE):

- **Eye/Face Protection:** Safety goggles compliant with relevant safety standards.
  - **Skin Protection:** Wear long-sleeved clothing and gloves made of chemical-resistant materials (e.g., nitrile).
  - **Respiratory Protection:** Use an approved respirator when ventilation is insufficient or during accidental release.
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## 7. Physical and Chemical Properties

- **Appearance:** White, crystalline solid
- **Odor:** Characteristic mothball-like odor
- **Odor Threshold:** ~0.04 ppm
- **pH:** Not applicable
- **Melting Point:** 79-82°C

- **Boiling Point:** ~218°C
  - **Flash Point:** ~79°C (closed cup)
  - **Evaporation Rate:** Slow
  - **Flammability:** Flammable solid
  - **Vapor Pressure:** ~0.087 mmHg at 25°C
  - **Density:** ~1.14 g/cm<sup>3</sup>
  - **Solubility:** Insoluble in water; soluble in most organic solvents
  - **Viscosity:** Not applicable
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## 8. Stability and Reactivity

### Stability:

Stable under normal handling, use, and storage.

### Reactivity:

- Reacts with strong oxidizing agents.

### Hazardous Reactions:

- Vapors may form explosive mixtures with air in confined spaces.

### Decomposition Products:

Thermal decomposition produces toxic fumes, including carbon monoxide and carbon dioxide.

### Conditions to Avoid:

Avoid heat, open flames, sparks, and other ignition sources.

### Incompatible Materials:

Strong oxidizing agents such as nitric acid and chromic acid.

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## 9. Toxicological Information

### Acute Toxicity:

- **Oral:** LD50 (rat): ~490 mg/kg (moderate toxicity).

- **Dermal:** LD50 (rabbit): ~2000 mg/kg.

### **Skin and Eye Contact:**

- Prolonged exposure may cause irritation to the skin, redness, or discomfort.
- Causes moderate to severe eye irritation.

### **Chronic Exposure:**

May cause liver and kidney damage after prolonged exposure. Potential central nervous system effects include headache, dizziness, and nausea.

### **Carcinogenicity:**

- Classified as a possible human carcinogen (Group 2B by IARC).

### **Other Information:**

Prolonged or repeated exposure may cause effects such as dermatitis or potential liver damage.

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## **10. Disposal Considerations**

- Dispose of unused product and waste material in accordance with local, regional, and federal regulations.
  - Avoid release into soils, drains, and waterways.
  - Contaminated containers should not be reused and must be disposed of appropriately as hazardous waste.
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