# Material Safety Data Sheet

According to ISO 11014-1

---

## 1. IDENTIFICATION OF SUBSTANCE

<table>
<thead>
<tr>
<th>Name:</th>
<th>PODOPHYLLUM RESIN 25 - 50% IN BENZOIN TINCTURE</th>
</tr>
</thead>
</table>
| Manufacturer: | Department of Pharmacy  
Duke University Medical Center  
Box 3089  
Durham, NC 27710  
919-684-5125 |
| Information Department: | Occupational and Environmental Safety Office  
Duke University Medical Center  
Box 3914  
Durham, NC 27710  
919-684-5996 |
| Emergency Information: | Regional Poison Control Center  
800-848-6946 |

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Characterization/Description: | Podophyllum resin and benzoin solution |
| Synonym(s): | Podophyllum resin: podophyllin; Benzoin: bitter almond oil camphor |
| Dangerous Components (CAS#, Hazardous Chemical, Percent): |  |
| 9000-55-9 Podophyllum resin | 25-50% |
| 119-53-9 Benzoin tincture | 50-75% |

## 3. HAZARDS IDENTIFICATION

**Hazard Description:**
Podophyllum resin is a poison by ingestion, subcutaneous, and intraperitoneal routes. Benzoin tincture may be harmful by ingestion, inhalation or skin absorption. Podophyllum and benzoin are skin, eye, and mucous membrane irritants. This product is flammable. (Hazard description based on concentrated constituents; this product is compounded mixture.)

**NFPA Ratings (scale 0-4):**
- Health: 3
- Fire: 3
- Reactivity: 0
TRADE NAME: PODOPHYLLUM RESIN 25 - 50% IN BENZOIN TINCTURE

4. FIRST AID MEASURES

Inhalation:

Remove victim to fresh air. Give oxygen or artificial respiration if necessary.

Skin Contact:

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. Seek medical attention if warranted.

Eye Contact:

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

Ingestion:

DO NOT INDUCE VOMITING.

If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital.

If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open, and lay the victim on his/her side with the head lower than the body. Transport the victim IMMEDIATELY to a hospital.
5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Agents:

Fires involving this material can be controlled with a CO₂, alcohol foam, or dry chemical extinguisher.

Protective Equipment:

Self-contained breathing apparatus and protective equipment for fire fighting.

6. ACCIDENTAL RELEASE MEASURES

Personnel Precautions:

Wear gloves (disposable surgical) and eye protection (chemical splash goggles).

Environmental Precautions:

None necessary under normal conditions of use.

Measures for Cleaning/Collection:

Use absorbent paper to pick up all liquid spill material. Seal the absorbent paper, as well as contaminated clothing, in a vapor-tight plastic bag for eventual disposal. Wash all contaminated surfaces with a soap and water solution.

7. HANDLING AND STORAGE

Handling:

Wear PPE when handling this material. Wash hands after handling.

Storage:

Store in a cool, dry, well-ventilated location.
TRADE NAME: PODOPHYLLUM RESIN 25 - 50% IN BENZOIN TINCTURE

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls:

None necessary under conditions of normal use.

Control Parameters:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Limit</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Podophyllum resin</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Benzoin tincture</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Personal Protective Equipment:

**Respiratory Protection**

None necessary under conditions of normal use.

**Skin Protection**

Wear disposable surgical gloves when using this chemical. If this chemical comes into contact with your gloves, or if a tear/puncture develops, remove gloves at once and wash hands.

**Eye Protection**

Splash-proof safety goggles should be worn while handling this chemical.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid

**pH:** N/A

**Color and Odor:** Brown, opaque; odor of tincture of benzoin

**Boiling/Freezing Points (°C):** N/A

**Flashpoint (°F):** <100

**Autoignition Temperature (°C):** N/A

**Explosion Properties:** N/A

**Vapor Pressure (mm Hg):** N/A

**Vapor Density (air = 1):** N/A

**Specific Gravity (water = 1):** N/A

**Solubility:** N/A
TRADE NAME: PODOPHYLLUM RESIN 25 - 50% IN BENZOIN TINCTURE

10. STABILITY AND REACTIVITY

General: Benzoin is sensitive to heat and light.

Materials to Avoid: Oxidizers and heat.

Hazardous Decomposition Products: When heated to decomposition, product may emit acrid smoke and irritating fumes.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: Podophyllum resin is a poison by ingestion, subcutaneous, and intraperitoneal routes. The oral LD$_{50}$ is 68 mg/kg (mouse). Benzoin tincture may be harmful by ingestion, inhalation or skin. The oral LD$_{50}$ is 10 g/kg (rat) and the skin LD$_{50}$ is 8870 mg/kg (rabbit).

Signs/Symptoms of Overexposure: May cause irritation of the skin, eyes, and mucous membranes; may cause contact dermatitis.

Chronic Toxicity: This product is not considered a carcinogen by NTP, IARC or OSHA.

12. ECOLOGICAL EFFECTS

None anticipated under normal conditions of use.

13. DISPOSAL CONSIDERATIONS

Dispose of all waste and contaminated materials associated with this chemical as specified by existing local, state and federal regulations concerning hazardous waste disposal. Contact the Occupational and Environmental Safety Office for specific guidance.

14. TRANSPORT INFORMATION

Proper Shipping Name (DOT): Not regulated by this mode of transportation.

15. REGULATORY INFORMATION

Benzoin is reported in EPA TSCA Inventory.

16. OTHER INFORMATION

This information is based on our present knowledge; however this shall not constitute a guarantee for any specific product features. No toxicity data are available on this specific formulation; this health hazard assessment is based on information that is available for its components.