

# BENZOIN SPRAY

## MATERIAL SAFETY DATA SHEET



**Class A – Compressed gas**

**Class B5 – Flammable material**

**Class D2B – Toxic** (No effects expected under normal conditions of use.)

### SECTION 1 - PRODUCT INFORMATION

**Supplier:**

Pharmascience Inc.  
6111 Royalmount Avenue  
Montreal, Quebec, H4P 2T4  
1-888-550-6060

**Manufacturer:**

Assured Packaging Inc.  
6080 Vipond Drive  
Mississauga, Ontario, L5T 2V4  
905- 565-1410

**Trade name:** Compound Benzoin Tincture Spray

**Chemical name:** Mixture of benzoin, dimethyl ether, isopropyl alcohol, and ethyl alcohol

**Product use:** Topical application

**Formula number:** 020-400

**WHMIS classification:** A (compressed gas), B-5 (flammable aerosol), D2B (toxic – temporary effects)

### SECTION 2 - HAZARDOUS INGREDIENTS

INGREDIENT	CAS #	PIN (UN)	% WEIGHT	EXPOSURE LIMITS (route, species)
Benzoin	119-53-9		25%	LD50: 10 000 mg/kg (oral, rat) LD50: >3000 mg/kg (oral, mouse) LD50: 8870 mg/kg (dermal, rabbit) LC50: N/A TLV: N/A
Isopropyl alcohol (isopropanol)	67-63-0		30-45%	LD50: 4220 mg/kg (oral, rat) LD50: 3600 mg/kg (oral, mouse) LC50: n/d TLV: 400 ppm
Ethyl alcohol (ethanol)	64-17-5	1987	15-25%	LD50: 14g/kg (oral, rat) LD50: >20g/kg (dermal, rabbit) LC50: 21 700pm (inhalation, rat,21.8 hours) TLV: 1000ppm
Dimethyl ether (propellant)	115-10-6	1033	20-30%	The oral and dermal LD50 are not known. LC50: 136.6 ppm (inhalation, mouse, 4H)

LD50 = Lethal dose in 50% of animals tested (specify route)

LC50 = Lethal concentration (by inhalation) in 50% of animals tested

TLV = Threshold limit values (The amounts of chemicals in the air that almost all healthy adult workers are predicted to be able to tolerate without adverse effects averaged over an 8-hour workday/40 hour work week.)

### SECTION 3 - PHYSICAL DATA

The following physical data are approximate only and do not represent specification values. They should only be used in the context of this material safety data sheet.

**Physical state:** Mixture of liquids and propellant  
**Appearance and odour:** Reddish liquid  
**Odour threshold (level at which it can be smelled):** N/A  
**Specific gravity (water=1):** 0.800  
**Vapour pressure (psig at 21°C):** 40-50 psig  
**Vapour density (air=1):** >1  
**Evaporation rate (n-butyl acetate= 1):** <1  
**Boiling point (°C):** N/A  
**Freezing point:** N/A  
**pH:** N/A  
**Coefficient of water/oil distribution:** N/A  
**Solubility in water (% by weight at 20°C):** 65%  
**% volatile by volume:** 92%

### SECTION 4 - FIRE OR EXPLOSION HAZARD

**WHMIS flammability classification:** Class B Division 5: flammable aerosol

**Flammability (determined by flame projection):**

- Zero cm (non-flammable)
- 0 - 15 cm (caution)
- 15 - 45 cm (warning)
- Over 45 cm (danger)

**Means of extinction:** Dry chemical, CO<sub>2</sub>, foam.

**Flash point:** < -73 °C                      **Method used:** Estimated (propellant only)

The flash point is the lowest temperature at which a fuel-air mixture present above the surface of a liquid will ignite if an ignition source is introduced.

**Flammable limits in air (% by volume):**                      **Lower:** 1.8-3.4                      **Upper:** 8.4-18

The Lower Flammable Limit (also known as the Lower Explosive Limit or LEL) is the minimum concentration of the fuel in the oxidizer (usually air) that is sufficient to allow burning to occur. Below the Lower Flammable Limit, the fuel-oxidizer mixture is too lean and no burning will occur. The Upper Flammable Limit (also known as the upper explosive limit or UEL) is the maximum concentration of the fuel in the oxidizer (usually air) that is sufficient to allow burning to occur. Above the Upper Flammable Limit, the fuel-oxidizer mixture is too rich and no burning will occur.

**Auto-ignition temperature:** N/A

The auto-ignition temperature is the minimum temperature at which a substance will ignite in the air when there is no ignition source present.

**Hazardous combustion products:** Hydrocarbon fumes and smoke, CO where combustion is incomplete.

**Explosion data:**

**Sensitivity to shock:** Yes. Handle with care. Do not drop.

**Sensitivity to static discharge:** Yes.

Containers may explode if exposed to temperatures > 50 °C

## SECTION 5 - REACTIVITY DATA

**Chemical stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Hazardous polymerization will not occur. Avoid storage in hot, unventilated areas.

**Incompatibility:** N/A

**Conditions of reactivity:** Avoid storage in hot, unventilated areas. Avoid shock, static discharge.

**Hazardous decomposition products (combustion):** Hydrocarbon fumes and smoke, CO where combustion is incomplete.

## SECTION 6 - TOXICOLOGICAL PROPERTIES

### Possible routes of entry:

- Inhalation (breathing)
- Skin/eye contact (localized irritation, burning sensation)
- Skin/eye absorption (systemic)
- Ingestion (systemic) - unlikely

### Effects of acute exposure:

**Symptoms:** Dizziness, nausea, irritation to skin and eyes.

**Isopropyl alcohol:** No adverse effects are expected under normal conditions of use. Exposure may cause central nervous system depression.

**Ethyl alcohol:** No adverse effects are expected under normal conditions of use. Acute exposure to ethanol by inhalation can cause dizziness, nausea, and headache. Ethanol vapours may irritate the eyes, nose, throat, and lungs and cause shortness of breath.

**Dimethyl ether:** Exposure may cause intoxication, blurred vision, headaches, dizziness, excitation, pharyngitis, convulsions, respiratory distress, asphyxia, pneumonitis, unconsciousness and death. Contact with the skin or eyes may result in frostbite, redness, pain and blurred vision due to rapid evaporation of liquid.

### Effects of chronic exposure:

**Ethyl alcohol:** Little or no systemic exposure is expected under normal conditions of use. Repeated contact to ethanol can irritate and dry the skin, with cracking, peeling and itching.

**Isopropyl alcohol:** Prolonged exposition can cause nausea, headaches and vomiting. Drowsiness and dizziness may also be observed.

**Exposure limits:** N/A

**Irritancy of product:** Presently unknown

**Sensitization to product:** Presently unknown

**Carcinogenicity of product:** Presently unknown

**Reproductive toxicity:** N/A

**Teratogenicity:** N/A

**Mutagenicity:** N/A

**Synergistic products:** Presently unknown

## SECTION 7 – PREVENTIVE MEASURES

Recommendations listed in this section indicate the type of equipment, which will provide protection against over-exposure to this product. Conditions of use, adequacy of engineering or other control measures and actual exposures will dictate the need for specific protection devices at your workplace.

### PERSONAL PROTECTIVE EQUIPMENT (PPE):

**Protective gloves:** Not normally required

**Eye protection:** Not normally required

**Other protective equipment:** Not normally required

**Ventilation:** Mechanical, if used indoors on a continuous basis.

**Specific engineering controls to be used:** Provide mechanical ventilation if used indoors on a continuous basis.

**Steps to be taken in case material is released or spilled:** Remove all source of ignition. Use inert absorbent and non-sparking material to avoid breathing fumes. Ventilate area. Prevent from entering sewers, streams, or other bodies of water.

**Waste disposal method:** Dispose of in accordance with local, provincial and federal regulations.

**Handling procedures and equipment:** This material is considered stable under normal ambient and anticipated handling conditions of temperature and pressure. Avoid shock and static discharge. No special equipment is required for handling.

**Storage requirements:** This material is considered stable under normal storage temperature and pressure conditions. Store in a cool, well-ventilated area not to exceed 50°C. Avoid shock and static discharge.

Do not puncture or incinerate containers even when empty.

**Special shipping information:** Avoid storage in hot, unventilated areas. Avoid shock and static discharge.

## SECTION 8 – FIRST AID MEASURES

**Inhalation:** Remove patient to fresh air. Get medical attention.

**Skin contact:** Flush exposed skin with copious amounts of water. Get medical attention.

**Eye contact:** Flush with copious amounts of water. Get medical attention immediately.

**Ingestion:** If ingested, do not induce vomiting. Get medical attention immediately. Contact your local poison control centre.

## SECTION 9 – PREPARATION INFORMATION

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**Revised by:** Elpida Sidiropoulos, Medical Information, Pharmascience

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