

**Material Safety Data Sheet****DL camphor MSDS****Section 1: Chemical Product and Company Identification****Product Name:** Camphor (DL)**Catalog Codes:** SLC3487**CAS#:** 76-22-2**RTECS:** EX1225000**TSCA:** TSCA 8(b) inventory: Camphor (DL)**CI#:** Not available.**Synonym:** Camphor, Synthetic, USP; 1,7,7-Trimethylbicyclo[2,2,1]heptan-2-one; (+-)-Camphor; Camphor, synthetic; 2-Bornanone; 2-Camphonone; Bicyclo(2,2,1)heptan-2-one, 1,7,7-trimethyl-; Gum Camphor**Chemical Name:** (DL)-Camphor**Chemical Formula:** C<sub>10</sub>H<sub>16</sub>O**Contact Information:****Hefei TNJ Chemical Industry Co.,Ltd.**

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**Section 2: Composition and Information on Ingredients****Composition:**

<b>Name</b>	<b>CAS #</b>	<b>% by Weight</b>
Camphor(DL)	76-22-2	100

**Toxicological Data on Ingredients:** Not applicable.

### Section 3: Hazards Identification

#### **Potential Acute Health Effects:**

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

#### **Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to upper respiratory tract, skin, eyes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

### Section 4: First Aid Measures

#### **Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

#### **Skin Contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

#### **Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

#### **Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### **Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

#### **Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar,

tie, belt or waistband.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** Flammable.

**Auto-Ignition Temperature:** 467°C (872.6°F)

**Flash Points:** CLOSED CUP: 65.6°C (150.1°F). OPEN CUP: 93°C (199.4°F).

**Flammable Limits:** LOWER: 0.6% UPPER: 3.5%

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards in Presence of Various Substances:** Flammable in presence of open flames and sparks, of heat.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks, of heat.

**Fire Fighting Media and Instructions:**

Flammable solid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Vapor is explosive when exposed to heat or flame

## Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:**

Flammable solid. Stop leak if without risk. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

**Storage:**

Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 23°C (73.4°F).

**Section 8: Exposure Controls/Personal Protection****Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:**

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:**

TWA: 2 STEL: 3 (ppm) [Australia] TWA: 2 STEL: 3 (ppm) [Canada] TWA: 12 STEL: 19 (mg/m<sup>3</sup>) [Canada] TWA: 2 (mg/m<sup>3</sup>) from NIOSH TWA: 2 (mg/m<sup>3</sup>) from OSHA (PEL) [United States] TWA: 2 STEL: 4 (ppm) from ACGIH (TLV) [United States] [1999] TWA: 2 STEL: 3 (ppm) [United Kingdom (UK)] TWA: 13 STEL: 19 (mg/m<sup>3</sup>) [United Kingdom (UK)]<sup>3</sup> Consult local authorities for acceptable exposure limits.

**Section 9: Physical and Chemical Properties**

**Physical state and appearance:** Solid. (Crystalline solid.)

**Odor:** Fragrant, Penetrating

**Taste:** Slightly bitter, cooling

**Molecular Weight:** 152.24 g/mole

**Color:** White.

**pH (1% soln/water):** Not available.

**Boiling Point:** 205°C (401°F)

**Melting Point:** 180°C (356°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 0.992 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** 5.24 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** 1.3 ppm

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, acetone.

**Solubility:**

Easily soluble in acetone. Very slightly soluble in cold water.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials, sources of ignition, excess heat.

**Incompatibility with various substances:** Not available.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:**

Incompatible with heat, sunlight, potassium permanganate, metallic salts, chromic anhydride, oxidizing materials, combustible materials, organic materials

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 1310 mg/kg [Mouse].

**Chronic Effects on Humans:**

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. May cause damage to the following

organs: upper respiratory tract, skin, eyes, central nervous system (CNS).

**Other Toxic Effects on Humans:**

Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case

of skin contact (permeator).

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** May affect genetic material based on animal data. Passes through the placental barrier in human.

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: Causes skin irritation. May cause epileptic seizures. Eye: Causes eye irritation.

May cause epileptic seizures. Inhalation: Causes irritation of the respiratory tract (mucous membranes) and may cause emphysema. May affect behavior - the brain and Central Nervous system (muscle contraction and spasticity). May affect the heart. Ingestion: Cause irritation of the gastrointestinal tract (nausea, vomiting. May affect behavior - the brain and Central Nervous system (dizziness, convulsions, seizures, change of motor activity, rigidity). May be harmful if swallowed. Certain medical conditions may be aggravated by exposure: kidney disorders, liver disorders, heart disorders, epilepsy. Chronic Potential Health Effects: none identified.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

p. 5

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:**

Waste disposed

## Section 14: Transport Information

**DOT Classification:** CLASS 4.1: Flammable solid.

**Identification:** : Camphor, Synthetic UNNA: 2717 PG: III

**Special Provisions for Transport:** Not available.

## Section 15: Other Regulatory Information

**Federal and State Regulations:**

Rhode Island RTK hazardous substances: Camphor (DL) Pennsylvania RTK: Camphor (DL)  
Florida: Camphor (DL)  
Minnesota: Camphor (DL) Massachusetts RTK: Camphor (DL) New Jersey: Camphor (DL)  
California Director's List of  
Hazardous Substances (8 CCR 339): Camphor (DL) Tennessee: Camphor (DL) TSCA 8(b)  
inventory: Camphor (DL)

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).  
EINECS: This product is on the  
European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:**

**WHMIS (Canada):** CLASS B-4: Flammable solid.

**DSCL (EEC):**

R36/38- Irritating to eyes and skin. S26- In case of contact with eyes, rinse immediately with  
plenty of water and seek medical  
advice. S37/39- Wear suitable gloves and eye/face protection.

**HMS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 2

**Reactivity:** 0

**Personal Protection:** E

**National Fire Protection Association (U.S.A.):**

**Health:** 0

**Flammability:** 2

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent.  
Wear appropriate respirator  
when ventilation is inadequate. Splash goggles.

**Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

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