

p-CYMENE

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1. Product Identification

Synonyms: 1-Methyl-4-isopropylbenzene; 4-Isopropyl-1-methylbenzene; Benzene, 1-isopropyl-4-methyl-; Camphogen; Cumeme, p-methyl-; Cymene; Cymol; Dolcymene; p-Isopropylmethylbenzene; p-Isopropyltoluene; p-Methylisopropyl benzene; Paracymene; Paracymol

CAS No.: 99-87-6

Molecular Weight: 134.21

Chemical Formula: C₁₀H₁₄

Product Codes: CHEM-581

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
p-Cymene	99-87-6	100%	Yes

3. Hazards Identification

Potential Acute Health Effects:

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

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

SAF-T-DATA Ratings

Health Rating: 2 - Moderate

Flammability Rating: 2 - Moderate (Flammable)

Reactivity Rating: 1 - Slight

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: Red (Flammable)

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. 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 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. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

5. Fire Fighting Measures

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 436°C (816.8°F)

Flash Points: CLOSED CUP: 47.222°C (117°F).

Flammable Limits: LOWER: 0.7% UPPER: 5.6%

Products of Combustion: These products are carbon oxides (CO, CO₂).

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. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable liquid, insoluble in water. 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: When heated to decomposition it emits acrid smoke and irritating fumes.

Special Remarks on Explosion Hazards: Explosion hazard is slight in the form of vapor.

6. Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

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 gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage:

Store in a segregated and approved area. 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).

8. Exposure Controls/Personal Protection

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Lab coat. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

9. Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweetish. Aromatic. Pleasant.

Taste: Not available.

Molecular Weight: 134.22 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not applicable.

Boiling Point: 177.1°C (350.8°F)

Melting Point: -68.9 (-92°F)

Critical Temperature: Not available.

Specific Gravity: 0.861 (Water = 1)

Vapor Pressure: Not available.

Vapor Density: 4.62 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is more soluble in oil; $\log(\text{oil/water}) = 4.1$

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility: Soluble in diethyl ether, acetone. Insoluble in cold water. Soluble in alcohol (ethanol), benzene.

10. Stability and Reactivity

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

11. Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation.

Toxicity to Animals: Acute oral toxicity (LD50): 3669 mg/kg [Rat].

Chronic Effects on Humans: May cause damage to the following organs: central nervous system (CNS).

Other Toxic Effects on Humans:

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

Special Remarks on Toxicity to Animals:

Lethal Dose/Conc 50% Kill: LD50 [Mouse] - Route: Inhalation; Dose: 19500 mg/m³

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. Symptoms can include erythema, dryness and defatting. It can be absorbed through the skin. Eyes: Contact with liquid causes eye irritation. Vapors are not irritating to the eyes. Inhalation: Vapors are not irritating to the throat. Inhalation of a high concentration of vapors may affect behavior/central nervous system and cause drowsiness, central nervous system depression, unconsciousness.

Ingestion: Causes nausea, vomiting, hypermotility, diarrhea. May also affect behavior/central nervous system (somnolence, headache). Aspiration into the lungs may cause chemical pneumonitis.

Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause defatting of the skin and dermatitis.

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.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

13. Disposal Considerations

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Cymene UNNA: 2046 PG: III

Special Provisions for Transport: Not available.

15. Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: p-Cymene Massachusetts RTK: p-Cymene Massachusetts spill list: p-Cymene TSCA 8(b) inventory: p-Cymene

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-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R10- Flammable. R36/38- Irritating to eyes and skin. S16- Keep away from sources of ignition - No smoking. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37- Wear suitable protective clothing and gloves.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: j

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

Health: 1

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

16. Other Information

References: Not available.

Other Special Considerations: Not available.

Product Use:

Laboratory Reagent and Consumer Hobby

Revision Information:

Revised 11 October 2011.

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