

Methyl Isobutyl Carbinol MSDS

Disclaimer: This document is intended as a safety guide for use by properly trained personnel. The information provided is believed to be correct but is not guaranteed to be all-inclusive. The user is responsible for determining the suitability of this information for a particular purpose and for compliance with all applicable regulations.

1. Product Name and Identification

- **Product Name:** [Methyl Isobutyl Carbinol](#)
- **CAS Number:** 108-11-2
- **Synonyms:** MIBC, 4-Methyl-2-pentanol, Methylamyl alcohol
- **Chemical Formula:** C₆H₁₄O

2. Composition/Ingredients

- **Chemical Name:** 4-Methyl-2-pentanol
- **Concentration:** Typically supplied at a purity of ≥98%.
- **Hazardous Component:** Yes

3. Hazards Identification

- **Physical Hazards:** Flammable liquid and vapor. Vapors can form explosive mixtures with air. Vapors are heavier than air and may travel to a source of ignition and flash back.
- **Health Hazards:** Causes serious eye irritation. May cause respiratory irritation, drowsiness, or dizziness. Harmful if inhaled. Prolonged or repeated skin contact may cause dryness or cracking.
- **Environmental Hazards:** Not classified as environmentally hazardous, but large spills should be prevented from entering waterways.

4. First Aid Measures

- **Inhalation:** Immediately move the person to fresh air. If breathing becomes difficult, administer oxygen. If breathing stops, provide artificial respiration. Seek medical attention if symptoms persist.
- **Skin Contact:** Remove contaminated clothing. Wash affected skin thoroughly with soap and plenty of water. If irritation develops or persists, get medical advice.
- **Eye Contact:** Immediately flush the eyes with large amounts of water for at least 15 minutes, holding the eyelids open to ensure thorough rinsing. Remove contact lenses if present and easy to do. Get immediate medical attention.

- **Ingestion:** Do NOT induce vomiting. If the person is conscious, rinse their mouth with water. Seek immediate medical attention. Never give anything by mouth to an unconscious person.

5. Handling and Storage

- **Handling:** Use only in areas with adequate ventilation. Keep away from heat, sparks, open flames, and other ignition sources. Ground and bond containers during material transfer. Use non-sparking tools. Avoid breathing vapor or mist. Avoid contact with skin and eyes. Wear appropriate personal protective equipment.
- **Storage:** Store in a cool, dry, well-ventilated area designated for flammable liquids. Keep containers tightly closed and properly labeled. Store away from incompatible materials such as strong oxidizing agents and acids.

6. Exposure Controls/Personal Protection

- **Exposure Limits:** Adhere to all applicable national and local occupational exposure limits (OELs).
- **Engineering Controls:** Use local exhaust ventilation to control airborne concentrations and keep them below exposure limits. Ensure safety showers and eyewash stations are located near the workstation.
- **Personal Protective Equipment (PPE):**
 - **Eye/Face Protection:** Wear chemical safety goggles or a face shield.
 - **Skin Protection:** Wear chemically resistant gloves (e.g., nitrile rubber, Viton®) and protective clothing to prevent skin contact.
 - **Respiratory Protection:** If exposure limits are exceeded or if irritation is experienced, use a NIOSH-approved respirator with an organic vapor cartridge.

7. Physical and Chemical Properties

- **Appearance:** Clear, colorless liquid
- **Odor:** Mild, alcoholic odor
- **Boiling Point:** 132°C (270°F)
- **Melting Point:** -90°C (-130°F)
- **Flash Point:** 41°C (106°F) (Closed Cup)
- **Vapor Pressure:** 2.9 mmHg @ 20°C (68°F)
- **Solubility:** Slightly soluble in water (1.7 g/100 mL @ 20°C).
- **Specific Gravity:** 0.807 @ 20°C (68°F)

8. Stability and Reactivity

- **Stability:** Stable under recommended storage conditions.
- **Reactivity:** Reacts with strong oxidizing agents.

- **Conditions to Avoid:** Heat, sparks, open flames, and other sources of ignition. Contact with incompatible materials.
- **Incompatible Materials:** Strong oxidizing agents, strong acids, and alkali metals.
- **Hazardous Decomposition Products:** Thermal decomposition can produce carbon monoxide (CO) and carbon dioxide (CO₂).

9. Toxicological Information

- **Acute Effects:**
 - **Inhalation:** Vapors may cause irritation to the respiratory system. High concentrations can lead to central nervous system depression, resulting in headaches, dizziness, and nausea.
 - **Dermal:** May cause mild skin irritation upon prolonged contact. Not expected to be absorbed through the skin in harmful amounts.
 - **Eyes:** Causes serious eye irritation, which may include redness, pain, and blurred vision.
 - **Ingestion:** Ingestion may cause gastrointestinal irritation, nausea, and vomiting.
- **Chronic Effects:** Prolonged or repeated skin exposure can lead to defatting of the skin, resulting in dryness, cracking, and dermatitis. Long-term exposure to high vapor concentrations may affect the central nervous system.

10. Disposal Considerations

- **Disposal Method:** This material and its container must be disposed of as hazardous waste. All disposal activities must comply with all federal, state, and local regulations. Do not allow the product to enter drains, sewers, or waterways. Engage a licensed professional waste disposal service. The material's flammability is a key consideration for disposal. Contaminated packaging should be handled with the same precautions as the product.