

# 2-Methyltetrahydrofuran MSDS

## Product Name and Identification

**Product Name:** [2-Methyltetrahydrofuran](#)

**CAS Number:** 96-47-9

**Chemical Formula:** C<sub>5</sub>H<sub>10</sub>O

**Synonyms:** 2-MTHF, Methyl THF

## Composition/Ingredients

**Substance Name:** 2-Methyltetrahydrofuran

**Chemical Identification:**

- CAS Number: 96-47-9
- EC Number: 202-507-4
- Purity/Concentration: ≥ 99% (typical)

## Hazards Identification

**Hazard Classification:**

- Flammable Liquids (Category 2)
- Acute Toxicity, Oral (Category 4)
- Specific Target Organ Toxicity (Single Exposure), Narcotic Effects (Category 3)

**Label Elements:**

- **Signal Word:** Danger
- **Hazard Statements:**
  - H225: Highly flammable liquid and vapor.
  - H302: Harmful if swallowed.
  - H336: May cause drowsiness or dizziness.
- **Precautionary Statements:**
  - P210: Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
  - P261: Avoid breathing vapors.
  - P280: Wear protective gloves/eye protection.

**Other Hazards:**

May form explosive peroxides when exposed to air or light.

## First Aid Measures

- **Eye Contact:** Immediately flush eyes with water for at least 15 minutes. Remove contact lenses if present. Seek medical attention if irritation persists.
- **Skin Contact:** Wash affected area thoroughly with soap and water. Remove contaminated clothing. Seek medical attention if irritation develops.
- **Inhalation:** Move the person to fresh air. If breathing is difficult, administer oxygen and seek medical attention.
- **Ingestion:** Rinse mouth thoroughly with water. Do not induce vomiting. Seek medical advice immediately.

## Handling and Storage

### Handling:

- Use only in well-ventilated areas.
- Keep away from heat, sparks, and open flames.
- Avoid inhalation of vapors and contact with skin or eyes.
- Always handle with appropriate personal protective equipment (PPE).

### Storage:

- Store in a cool, dry, well-ventilated area, away from direct sunlight.
- Keep containers tightly closed when not in use.
- Use explosion-proof electrical equipment and proper grounding.

## Exposure Controls/Personal Protection

### Control Parameters:

- **Occupational Exposure Limits (OEL):** Not established (use with caution).

### Engineering Controls:

- Ensure adequate ventilation, preferably through localized exhaust systems.
- Use explosion-proof equipment when handling large quantities.

### Personal Protective Equipment (PPE):

- **Eyes/Face Protection:** Safety goggles or face shield.
- **Skin Protection:** Chemical-resistant gloves (e.g., nitrile).
- **Respiratory Protection:** Use an approved respirator if ventilation is insufficient.

## Physical and Chemical Properties

- **Appearance:** Clear, colorless liquid
- **Odor:** Ether-like, pleasant

- **Boiling Point:** ~80.2°C (176.4°F)
- **Flash Point:** ~11°C (51.8°F) (closed cup)
- **Flammability:** Highly flammable
- **Vapor Pressure:** ~78 mmHg at 20°C
- **Solubility:** Slightly soluble in water; miscible with organic solvents
- **Density:** ~0.86 g/cm<sup>3</sup> at 20°C
- **Molecular Weight:** 86.13 g/mol

## Stability and Reactivity

### Stability:

Stable under recommended storage conditions. Exposure to air and light may lead to peroxide formation.

### Reactivity:

Reacts with strong oxidizing agents.

### Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, and peroxides may be released during thermal decomposition.

## Toxicological Information

- **Acute Toxicity:** Harmful if swallowed (LD50, oral, rat ~1,600 mg/kg).
- **Skin and Eye Irritation:** May cause irritation with prolonged or repeated exposure.
- **Respiratory Effects:** Prolonged inhalation of vapors may cause dizziness, drowsiness, or respiratory irritation.
- **Chronic Exposure:** No specific long-term effects documented, but frequent contact should be avoided.

## Disposal Considerations

Dispose of according to local, state, and federal regulations. Do not discharge into drains or water bodies. Ensure containers are properly labeled and handled by authorized waste disposal facilities or services.