

Material Safety Data Sheet (MSDS)

Methyl Ethyl Ketone

Revision Date: 25-September-2025

Version: 1.0

Section 1: Product Identification

- **Product Name:** Methyl Ethyl Ketone
- **Chemical Formula:** C₄H₈O
- **CAS No:** 78-93-3
- **Synonyms:** 2-Butanone; MEK
- **Recommended Use:** Used as a solvent in coatings, adhesives, inks, cleaning agents, and chemical intermediates.

Section 2: Hazards Identification

- **Classification (GHS):** Flammable Liquid (Category 2); Eye Irritation (Category 2A); Specific Target Organ Toxicity Single Exposure (Category 3)
- **Signal Word:** Danger
- **Hazard Statements:**
 - Highly flammable liquid and vapor
 - Causes serious eye irritation
 - May cause drowsiness or dizziness
- **Precautionary Statements:**
 - Keep away from heat, sparks, open flames, and hot surfaces
 - Use explosion-proof equipment

- Wear protective gloves and eye protection
- If in eyes: rinse cautiously with water for several minutes
- If inhaled: remove person to fresh air and keep at rest

Section 3: Composition / Information on Ingredients

- **Concentration:** $\geq 99\%$

Section 4: First Aid Measures

- **Inhalation:** Remove person to fresh air. If breathing is difficult, seek medical attention.
- **Skin Contact:** Wash with soap and water. Remove contaminated clothing.
- **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present. Seek immediate medical attention.
- **Ingestion:** Rinse mouth. Do not induce vomiting. Seek immediate medical advice.

Section 5: Fire-Fighting Measures

- **Suitable Extinguishing Media:** Alcohol-resistant foam, dry chemical, carbon dioxide, water spray.
- **Specific Hazards:** Vapors may form explosive mixtures with air. Thermal decomposition produces carbon oxides.
- **Protective Equipment:** Firefighters should wear self-contained breathing apparatus and full protective gear.

Section 6: Accidental Release Measures

- **Personal Precautions:** Eliminate all ignition sources. Avoid breathing vapors. Ensure adequate ventilation. Use personal protective equipment.

- **Environmental Precautions:** Prevent entry into drains and waterways.
- **Cleanup Methods:** Absorb with inert material (sand/earth). Place in chemical waste container. Wash spill area thoroughly.

Section 7: Handling and Storage

- **Handling:** Avoid contact with eyes and skin. Avoid inhalation of vapors. Use only with adequate ventilation. Keep away from ignition sources.
- **Storage:** Store in tightly closed containers in a cool, dry, well-ventilated place away from heat and direct sunlight. Ground all equipment.

Section 8: Exposure Controls / Personal Protection

- **Exposure Limits:** ACGIH TLV: 200 ppm (TWA), 300 ppm (STEL); OSHA PEL: 200 ppm (TWA)
- **Engineering Controls:** Provide explosion-proof ventilation.
- **Personal Protective Equipment:** Safety goggles, chemical-resistant gloves, protective clothing; respirator if ventilation is inadequate.

Section 9: Physical and Chemical Properties

- **Appearance:** Colorless liquid
- **Odor:** Sweet, sharp odor (acetone-like)
- **Boiling Point:** 79.6 °C
- **Flash Point:** -9 °C (closed cup)
- **Solubility:** Miscible with water, alcohol, ether, and most organic solvents
- **Molecular Weight:** 72.11 g/mol

Section 10: Stability and Reactivity

- **Stability:** Stable under recommended storage conditions.
- **Incompatible Materials:** Strong oxidizers, strong acids, strong bases.
- **Hazardous Decomposition Products:** Carbon oxides.
- **Conditions to Avoid:** Heat, flames, sparks, static discharge.

Section 11: Toxicological Information

- **Routes of Exposure:** Inhalation, ingestion, skin and eye contact.
- **Acute Effects:** Causes serious eye irritation; may cause drowsiness or dizziness. Oral LD50 (rat): 2,737 mg/kg.
- **Chronic Effects:** Prolonged exposure may cause damage to liver and kidneys.

Section 12: Ecological Information

- **Ecotoxicity:** Harmful to aquatic life in high concentrations.
- **Persistence and Degradability:** Readily biodegradable.
- **Bioaccumulative Potential:** Low.
- **Mobility in Soil:** High mobility; may contaminate groundwater.

Section 13: Disposal Considerations

- Dispose of product/container in accordance with local/regional/national regulations. Incineration is preferred method. Do not release to environment.

Section 14: Transport Information

- **UN Number:** UN1193
- **Proper Shipping Name:** Methyl Ethyl Ketone
- **Hazard Class:** 3
- **Packing Group:** II

Section 15: Regulatory Information

- Listed on major chemical inventories (TSCA, EINECS, etc.).
- Subject to regulations for flammable liquids and occupational exposure limits.
- Classified as hazardous under GHS.

Section 16: Other Information

Disclaimer: The information provided is believed to be correct but does not claim to be exhaustive. Users must verify suitability under actual conditions of use. Triveni Chemicals disclaims liability for damage resulting from handling or contact.