

PRODUCT IDENTIFICATION



Product Name: Methyl Isobutyl Ketone (MIBK) Technical Grade

CAS Number: 108-10-1

Molecular Formula: C₆H₁₂O

Molecular Weight: 100.16 g/mol

Grade: Technical Grade

Purity / Concentration: Not Available

Synonyms: 4-Methyl-2-pentanone, MIBK

PRODUCT OVERVIEW

Alliance Chemical's Technical Grade Methyl Isobutyl Ketone (MIBK) is a clear, colorless liquid with a purity of 99.5%. MIBK is valued for its excellent solvency properties, making it ideal for use as a solvent in paints, coatings, and adhesives. Its specific gravity is approximately 0.8 g/mL at 20°C.

Grade Significance: Technical Grade MIBK is suitable for applications where high purity is not critical but consistent performance is still required. While it meets defined specifications, it may contain trace impurities that do not significantly affect its intended use in industrial applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

| PARAMETER | UNIT | TYPICAL | MIN | MAX | TEST METHOD |
|-------------------------|------|---------|-------|--------|-------------|
| Assay (wt%) | % | 99.5 | 98.5 | — | GC |
| Color (APHA) | APHA | 5 | — | 10 | ASTM D1209 |
| Specific Gravity (20°C) | g/mL | 0.8 | 0.798 | 0.802 | ASTM D4052 |
| Water Content | % | 0.03 | — | 0.1 | ASTM D1364 |
| Acidity As Acetic Acid | % | 0.0010 | — | 0.0050 | ASTM D1613 |
| Non Volatile Matter | ppm | 5 | — | 20 | ASTM D1353 |

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

| | | | |
|--|----------------------------------|----------------------------|---|
| Appearance | Clear, colorless liquid | Odor | Sweet, ketone-like odor |
| Form | Liquid | Boiling Point | 116°C (241°F) |
| Melting / Freezing Point | -84°C (-119°F) | Flash Point | 14°C (57°F) |
| Specific Gravity | 0.798 | Solubility | Soluble in water, alcohol, ether, and most organic solvents |
| Molecular Formula | C ₆ H ₁₂ O | Molecular Weight | 100.16 g/mol |
| Vapor Pressure (20°C) | 30 mmHg | Viscosity (25°C) | 0.54 cP |
| Refractive Index (20°C) | 1.426 | Density (25°C) | 0.805 g/mL |
| Partition Coefficient (log_{0.7} P) | | Decomposition Temp. | >= 320 |

APPLICATIONS

1. **Paints and Coatings** — MIBK serves as a solvent in paints, coatings, and lacquers, enhancing their application and drying properties. Its solvency characteristics help ensure even pigment distribution and film formation.
2. **Adhesives** — In the adhesives industry, MIBK acts as a solvent to dissolve and blend various adhesive components. This ensures proper viscosity and bonding strength in the final adhesive product.
3. **Pharmaceuticals** — MIBK is used in the extraction and purification of active pharmaceutical ingredients (APIs) and other compounds. Its selective solvency aids in separating desired components from complex mixtures.
4. **Chemical Synthesis** — As a chemical intermediate, MIBK participates in the synthesis of various chemicals and compounds. Its ketone functionality allows for diverse chemical transformations.
5. **Industrial Cleaning** — MIBK is employed as a cleaning agent for industrial equipment and surfaces, effectively removing residues and contaminants. Its solvency power helps dissolve and lift away stubborn deposits.
6. **Printing Inks** — MIBK is used as a solvent in printing inks, contributing to their flow and drying characteristics. It ensures consistent ink application and print quality.

STORAGE & HANDLING

Proper storage of MIBK is crucial due to its flammability (Flash Point: 14°C). Keep containers tightly closed and stored in a cool, well-ventilated area away from heat, sparks, and open flames to prevent fire hazards. Exposure to air and moisture should be minimized to maintain product quality.

- Store in a cool, well-ventilated area away from heat sources and open flames.
- Use containers made of compatible materials such as HDPE or glass.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper PPE including gloves and goggles when handling.
- Keep container tightly closed when not in use to prevent evaporation.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 55 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H225: Highly Flammable liquid and vapor [Danger Flammable liquids]
- H319: Causes serious eye irritation [Warning Serious eye damage/eye irritation]
- H332: Harmful if inhaled [Warning Acute toxicity, inhalation]
- H336: May cause drowsiness or dizziness [Warning Specific target organ toxicity, single exposure; Narcotic effects]
- H351: Suspected of causing cancer [Warning Carcinogenicity]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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