

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

Methyl Isobutyl Ketone (MIBK) is a high-purity, clear solvent characterized by an assay of 99.95% and low moisture content. As a versatile Technical Grade chemical, it is widely utilized for its exceptional solvency in industrial coatings, adhesives, and pharmaceutical extraction processes.

Grade Significance: Technical Grade signifies that this product is manufactured to meet consistent industrial standards for purity and performance, making it an economical and reliable choice for large-scale manufacturing and processing applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Fid	%	99.95	99	100.5	GC-FID
Color (APHA)	APHA	5	—	15	ASTM D1209
Specific Gravity (20°C)	g/mL	0.8017	0.7997	0.8037	Hydrometer @ 20°C
Residue On Evaporation	ppm	10	0	50	Evaporation
Water Karl Fischer	%	0.02	—	0.3	ASTM E203 / ISO 6296
Acidity As Acetic	ppm	6	0	20	Titration
Distillation Range	°C	116.0	114.0	117.0	ASTM D1078

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	243 to 244 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	-120.5 °F (NTP, 1992)	Flash Point	73 °F (NTP, 1992)
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 P)	0.7	Decomposition Temp.	>= 320

APPLICATIONS

1. **Paints and Coatings** — MIBK acts as a powerful solvent for nitrocellulose, acrylic, and vinyl resins, ensuring smooth application and consistent drying rates.
2. **Pharmaceuticals** — It is frequently employed in the extraction and purification of active pharmaceutical ingredients due to its selective solubility properties.
3. **Chemical Synthesis** — This compound serves as a vital intermediate in the synthesis of various specialty chemicals and organic compounds.
4. **Industrial Cleaning** — Its effective solvency makes it an ideal choice for cleaning industrial equipment and degreasing metal surfaces.
5. **Adhesives and Sealants** — MIBK is used to adjust the viscosity and evaporation rate in the formulation of high-performance industrial adhesives.

STORAGE & HANDLING

Because MIBK is a highly flammable liquid with a flash point of 73 °F, it must be stored in a cool, well-ventilated area away from ignition sources to prevent fire hazards. Proper containment is essential to prevent the accumulation of vapors, which can be harmful if inhaled.

- 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 vapour
- H319: Causes serious eye irritation
- H332: Harmful if inhaled
- H335: May cause respiratory irritation
- H351: Suspected of causing cancer
- EUH066: Repeated exposure may cause skin dryness or cracking

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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