

PRODUCT IDENTIFICATION



Product Name: Methyl Isobutyl Ketone (MIBK) ACS Grade

CAS Number: 108-10-1

Molecular Formula: C₆H₁₂O

Molecular Weight: 100.16 g/mol

Grade: ACS Grade

Purity / Concentration: Not Available

Synonyms: 4-Methyl-2-pentanone, MIBK

PRODUCT OVERVIEW

Methyl Isobutyl Ketone (MIBK) ACS Grade is a high-purity solvent featuring a 99.8% assay and exceptional clarity, meeting rigorous analytical standards. This volatile liquid serves as a critical component in analytical chemistry and industrial synthesis, valued for its superior solvency and low residue profile.

Grade Significance: ACS Grade signifies that this product meets the high-purity specifications established by the American Chemical Society, ensuring it is suitable for sensitive laboratory applications and analytical testing.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.8	99	—	GC-FID
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	0.8	0.799	0.802	USP <841>
Residue After Ignition	%	0.0005	—	0.0010	Gravimetric
Water Content	%	0.02	—	0.1	Karl Fischer Titration
Substances Darkened By Sulfuric Acid	Pass/Fail	Pass	—	—	Visual
Acidity As Acetic Acid	%	0.0010	—	0.0050	Titration

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, volatile liquid with sharp ketone odor	Odor	Sweet, ketone-like odor
Form	Liquid	Boiling Point	116°C (240.8°F)
Melting / Freezing Point	-84°C (-119.2°F)	Flash Point	14°C (57.2°F)
Specific Gravity	0.798	Solubility	Partial water solubility, excellent organic solvent
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)	0.3	Decomposition Temp.	Not expected to decompose below 180°C under normal conditions

APPLICATIONS

1. **Analytical Chemistry** — Functions as a high-purity mobile phase component in reversed-phase high-performance liquid chromatography (HPLC) to facilitate precise compound separation.
2. **Paints and Coatings** — Utilized as a high-performance solvent in industrial paint formulations due to its excellent solvency properties and evaporation rate.
3. **Pharmaceuticals** — Employed in the extraction and purification processes of active pharmaceutical ingredients where high chemical consistency is required.
4. **Chemical Manufacturing** — Serves as a versatile intermediate in the synthesis of complex chemical compounds and specialty derivatives.

STORAGE & HANDLING

Due to its high flammability and low flash point of 14°C, MIBK must be stored in a cool, well-ventilated area away from heat, sparks, and open flames. Proper containment prevents the accumulation of hazardous vapors and ensures the integrity of the reagent by minimizing potential contamination.

- Store in a cool, well-ventilated area away from heat sources.
- Use materials compatible with ketones, such as HDPE or glass containers.
- Avoid contact with strong oxidizing agents and acids.
- Keep container tightly closed when not in use to prevent evaporation.
- Ensure proper personal protective equipment (PPE) is worn, including gloves and goggles.

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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