

PRODUCT IDENTIFICATION



Product Name: Methyl n-Propyl Ketone (MPK) ACS

CAS Number: 107-87-9

Molecular Formula: C₅H₁₀O

Molecular Weight: 86.13 g/mol

Grade: ACS Grade

Purity / Concentration: Not Available

Synonyms: 2-Pentanone, Methyl propyl ketone

PRODUCT OVERVIEW

Methyl n-Propyl Ketone (MPK) ACS grade is a high-purity solvent characterized by its clear, mobile liquid appearance and distinct fruity odor. With an assay of 99.1% and strictly controlled impurity levels, it is an essential reagent for analytical chemistry and high-performance liquid chromatography (HPLC) applications.

Grade Significance: ACS Grade signifies that this product meets the rigorous specifications set by the American Chemical Society, ensuring the consistency and purity required for sensitive analytical and laboratory procedures.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.1	98	—	GC-FID
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	0.808	0.806	0.809	ASTM D4052
Residue After Ignition	%	0.0005	—	0.0020	Gravimetric
Water Content	%	0.02	—	0.1	Karl Fischer Titration
Heavy Metals (as Pb)	ppm	0.1	—	1	ICP-OES
Iron (Fe)	ppm	0.1	—	0.5	ICP-OES
Chloride (Cl ⁻)	ppm	1	—	5	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	1	—	5	Ion Chromatography
Acidity As Acetic Acid	%	0.0010	—	0.0050	Titration
Alkalinity	—	Passes Test	—	—	ACS Reagent Chemicals

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, mobile liquid with fruity ketone character	Odor	Characteristic ketone odor
Form	Liquid	Boiling Point	102°C (215.6°F)
Melting / Freezing Point	-86°C (-122.8°F)	Flash Point	5°C (41°F)
Specific Gravity	0.803	Solubility	Low water solubility, excellent organic solvent
Molecular Formula	C ₅ H ₁₀ O	Molecular Weight	86.13 g/mol
Vapor Pressure (20°C)	30 mmHg	Viscosity (25°C)	0.45 cP
Refractive Index (20°C)	1.392	Density (25°C)	0.805 g/mL

APPLICATIONS

- Analytical Chemistry** — MPK is frequently used as a mobile phase component in reversed-phase HPLC, where its high purity ensures reliable separation of complex organic compounds.
- Pharmaceuticals** — It serves as a critical solvent in the extraction of active pharmaceutical ingredients from natural sources, ensuring minimal contamination due to its low residue profile.
- Coatings and Adhesives** — Due to its effective solvency and evaporation rate, MPK is widely utilized in the formulation of high-performance paints, coatings, and industrial adhesives.
- Chemical Synthesis** — This compound acts as a versatile intermediate in various organic synthesis pathways, providing a stable platform for the creation of more complex chemical structures.

STORAGE & HANDLING

Because MPK is a highly flammable liquid with a flash point of 5°C, it 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 protecting it from environmental moisture and contaminants.

- Store in a cool, dry, well-ventilated area away from heat sources.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper personal protective equipment (PPE) is worn, including gloves and goggles.
- Keep away from direct sunlight and sources of ignition.

AVAILABLE PACKAGING

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

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H225 (31.3%): Highly Flammable liquid and vapor [Danger Flammable liquids]
- H302 (92.7%): Harmful if swallowed [Warning Acute toxicity, oral]
- H319 (91.1%): Causes serious eye irritation [Warning Serious eye damage/eye irritation]
- H335 (74.6%): May cause respiratory irritation [Warning Specific target organ toxicity, single exposure; Respiratory tract irritation]

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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