

PRODUCT IDENTIFICATION



Product Name: Methyl Ethyl Ketone (MEK)

CAS Number: 78-93-3

Molecular Formula: C₄H₈O

Molecular Weight: 72.11 g/mol

Grade: Technical

Purity / Concentration: 100%

Synonyms: Butanone, 2-Butanone

PRODUCT OVERVIEW

Methyl Ethyl Ketone (MEK), also known as 2-Butanone, is a high-purity technical grade solvent characterized by its excellent solvency power and rapid evaporation rate. With an assay of 99.7% and a low moisture content of 0.03%, this clear, volatile liquid is an essential component for diverse industrial applications requiring precision and consistency.

Grade Significance: Technical grade indicates that this product is manufactured to meet rigorous industrial standards, ensuring the reliability and chemical consistency required for large-scale production and processing tasks.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Fid	%	100.0	99.5	—	GC-FID
Color (APHA)	APHA	3	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	0.806	0.804	0.807	Hydrometer @ 25°C
Water Karl Fischer	%	0.02	—	0.05	ASTM E203 / ISO 6296
Acidity As Acetic	%	0.0020	—	0.0030	Titration per ACS/USP

Values based on 2 batches tested. ND = Not Detected.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear volatile liquid, pale colorless	Odor	Sweet, acetone-like odor
Form	Liquid	Boiling Point	175.3 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	-123.3 °F (NTP, 1992)	Flash Point	26 °F (NTP, 1992)
Specific Gravity	0.805	Solubility	Miscible with water, alcohols
Molecular Formula	C ₄ H ₈ O	Molecular Weight	72.11 g/mol
Vapor Pressure (20°C)	80 mmHg	Viscosity (25°C)	0.43 cP
Refractive Index (20°C)	1.378	Density (25°C)	0.805 g/mL

APPLICATIONS

1. **Coatings and Adhesives** — MEK acts as a high-performance solvent in the formulation of paints and coatings, effectively dissolving a wide range of polymers to ensure optimal application consistency.
2. **Pharmaceutical Manufacturing** — It is frequently utilized in liquid-liquid extraction processes, serving as a reliable medium for isolating high-purity pharmaceutical intermediates.
3. **Analytical Chemistry** — The product is commonly used as a mobile phase component in reversed-phase high-performance liquid chromatography (HPLC) to facilitate the accurate separation of complex organic compounds.
4. **Industrial Maintenance** — Due to its powerful degreasing properties, MEK is highly effective for cleaning metal parts and industrial equipment, ensuring surfaces are free of contaminants.

STORAGE & HANDLING

Proper storage is critical because MEK is a highly flammable liquid with a flash point of -4°C, meaning it can easily ignite if exposed to sparks or open flames. Containers must be kept tightly sealed in a cool, well-ventilated area to prevent the buildup of flammable vapors and to maintain the integrity of the chemical purity.

- Store in a cool, well-ventilated area away from heat sources.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Keep away from strong oxidizing agents and acids.
- Ensure proper PPE including gloves and goggles are used during handling.
- Avoid exposure to light and moisture to maintain product integrity.

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]
- H336: May cause drowsiness or dizziness [Warning Specific target organ toxicity, single exposure; Narcotic effects]

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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