

PRODUCT IDENTIFICATION



Product Name: Methanol Technical Grade

CAS Number: 67-56-1

Molecular Formula: CH₄O

Molecular Weight: 32.042 g/mol

Grade: Technical Grade

Purity / Concentration: 100%

Synonyms: Methyl Alcohol, Carbinol

PRODUCT OVERVIEW

Methanol Technical Grade (CAS 67-56-1) is a high-purity, clear, and colorless solvent essential for industrial applications. Featuring a 99.1% assay and low impurity levels, this versatile chemical is widely utilized as a fundamental solvent and fuel additive.

Grade Significance: Technical Grade methanol provides a balance of high purity and cost-effectiveness, making it suitable for general industrial, manufacturing, and laboratory processes where extreme pharmaceutical-grade precision is not required.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	99.97	99.5	100.0	GC
Color (APHA)	APHA	3	—	5	APHA
Residue On Evaporation	ppm	10	0	50	Evaporation
Water Karl Fischer	%	0.01	—	0.1	Karl Fischer
Chlorides As Cl	ppm	0.5	0	25	ICP
Acidity As Acetic	ppm	10	0	30	Titration
Aldehydes As Acetaldehyde	ppm	0.0020	0	10	Spectrophotometry

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid with a characteristic alcoholic odor	Odor	Slightly sweet odor
Form	Liquid	Boiling Point	148.3 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	-144 °F (NTP, 1992)	Flash Point	52 °F (NTP, 1992)
Specific Gravity	0.791	Solubility	Miscible with water, alcohols, and most organic solvents
Molecular Formula	CH ₄ O	Molecular Weight	32.042 g/mol
Vapor Pressure (20°C)	97 mmHg	Viscosity (25°C)	0.54 cP
Refractive Index (20°C)	1.3288	Density (25°C)	0.791 g/mL
Partition Coefficient (log P)	-0.7 (approx.)	Decomposition Temp.	Not readily decomposed; decomposition at very high temperatures

APPLICATIONS

1. **Analytical Chemistry** — Serves as a reliable mobile phase component in reversed-phase high-performance liquid chromatography for effective organic compound separation.
2. **Laboratory Research** — Functions as a baseline solvent in UV-Vis spectroscopy due to its notably low UV cutoff wavelength.
3. **Automotive Engineering** — Utilized as a high-performance fuel additive to significantly enhance combustion efficiency in various engine systems.
4. **Chemical Manufacturing** — Acts as an effective solvent in diverse chemical reactions and industrial processes to facilitate the dissolution of various reactants.

STORAGE & HANDLING

Proper storage is critical because methanol is highly flammable with a flash point of 11°C, necessitating a cool, well-ventilated area away from ignition sources. Additionally, because the substance is toxic if swallowed or in contact with skin, secure containment is essential to prevent accidental exposure and environmental release.

- 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 is worn, including gloves and goggles, when handling.
- Avoid exposure to light and moisture to maintain product integrity.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H225: Highly Flammable liquid and vapor [Danger Flammable liquids]
- H301: Toxic if swallowed [Danger Acute toxicity, oral]
- H311: Toxic in contact with skin [Danger Acute toxicity, dermal]
- H331: Toxic if inhaled [Danger Acute toxicity, inhalation]
- H370 **: Causes damage to organs [Danger Specific target organ toxicity, single exposure]

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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