

PRODUCT IDENTIFICATION



Product Name: Methanol ACS Reagent Grade

CAS Number: 67-56-1

Molecular Formula: CH₄O

Molecular Weight: 32.042 g/mol

Grade: Reagent Grade

Purity / Concentration: 99.8%

Synonyms: Methyl alcohol, Carbinol

PRODUCT OVERVIEW

Methanol ACS Reagent Grade is a high-purity solvent featuring a 99.95% assay and minimal impurity levels, such as 0.02% water content and 5 APHA color. This volatile, clear liquid is an essential chemical reagent widely utilized in analytical chemistry and advanced synthesis applications.

Grade Significance: Reagent Grade signifies that the chemical meets or exceeds the strict purity standards set by the American Chemical Society, ensuring reliability and consistent results for sensitive laboratory analysis.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	99.97	99.8	—	GC
Color (APHA)	APHA	5	—	10	APHA
Specific Gravity (20°C)	g/mL	0.792	0.791	0.793	Hydrometer @ 25°C
Residue On Evaporation	ppm	3	—	10	Evaporation
Water Karl Fischer	%	0.01	—	0.1	Karl Fischer
Chlorides As Cl	ppm	0.5	0	25	ICP
Acetone Aldehydes	%	0.0009	—	0.0030	Per specification
Acidity As Acetic	ppm	6	—	20	Titration
Aldehydes As Acetaldehyde	ppm	0.0020	0	10	Spectrophotometry
Alkalinity	—	0.0001	—	0.0003	Per specification

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Volatile clear liquid, transparent	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)
Solubility	Fully miscible with water and 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		

APPLICATIONS

1. **Analytical Chemistry** — Used as a high-performance mobile phase component in reversed-phase chromatography for the precise separation of organic compounds.
2. **Spectroscopy** — Serves as an ideal baseline solvent in UV-Vis spectroscopy due to its low UV cutoff wavelength, ensuring minimal background interference.
3. **Chemical Manufacturing** — Utilized as a versatile solvent and reactive intermediate in various complex chemical synthesis processes.
4. **Automotive Engineering** — Functions as a high-efficiency fuel additive designed to improve combustion performance and engine efficiency.

STORAGE & HANDLING

Proper storage is critical because Methanol is a highly flammable liquid with a flash point of 11°C, requiring a cool, well-ventilated area away from ignition sources. Additionally, maintaining a tightly sealed container prevents contamination and evaporation, ensuring the integrity of its high-purity analytical specifications.

- Store in a cool, well-ventilated area away from heat sources.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid contact with strong oxidizers and acids.
- Ensure proper PPE including gloves and goggles are worn during handling.
- Keep away from open flames and sources of ignition.

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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