

### PRODUCT IDENTIFICATION



**Product Name:** Methanol ACS Reagent Grade

**CAS Number:** 67-56-1

**Molecular Formula:** CH<sub>4</sub>O

**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 (wt%)	%	99.95	99.9	—	GC
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	0.7915	0.791	0.793	USP <841>
Residue After Ignition	%	0.0005	—	0.0010	ACS
Water Content	%	0.02	—	0.1	Karl Fischer
Iron (Fe)	ppm	0.05	—	0.5	ICP-MS
Chloride (Cl <sup>-</sup> )	ppm	0.1	—	0.5	Ion Chromatography
Substances Darkened By H <sub>2</sub> SO <sub>4</sub>	—	Passes Test	—	—	ACS
Acetone And Aldehyde	%	0.0010	—	0.0030	ACS
Acidity Meq Per G	meq/g	0.0001	—	0.0003	Titration
Alkalinity Meq Per G	meq/g	0.0001	—	0.0002	Titration
Sulfur Compounds As S	ppm	1	—	1	ACS

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

## PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance</b>	Volatile clear liquid, transparent	<b>Odor</b>	Slightly sweet odor
<b>Form</b>	Liquid	<b>Boiling Point</b>	64.7°C (148.5°F)
<b>Melting / Freezing Point</b>	-97.8°C (-144°F)	<b>Flash Point</b>	11°C (51.8°F)
<b>Solubility</b>	Fully miscible with water and organic solvents	<b>Molecular Formula</b>	CH <sub>4</sub> O
<b>Molecular Weight</b>	32.042 g/mol	<b>Vapor Pressure (20°C)</b>	97 mmHg
<b>Viscosity (25°C)</b>	0.54 cP	<b>Refractive Index (20°C)</b>	1.3288
<b>Density (25°C)</b>	0.791 g/mL		

## APPLICATIONS

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