

PRODUCT IDENTIFICATION



Product Name: Denatured Alcohol 190 Proof 3C

CAS Number: 64-17-5

Molecular Formula: C₂H₆O

Molecular Weight: 46.07 g/mol

Grade: Technical

Purity / Concentration: 95%

Synonyms: Ethyl Alcohol, Ethanol

PRODUCT OVERVIEW

Denatured Alcohol 190 Proof 3C is a high-purity technical grade solvent, specifically formulated with 95% ethanol and 4.5% methanol. This clear, colorless liquid is engineered for consistent performance, featuring a low nonvolatile residue of 1 mg/100mL to ensure minimal contamination in industrial processes.

Grade Significance: Technical grade indicates that this product is manufactured to meet specific industrial performance standards, offering a cost-effective solution for applications where absolute pharmaceutical or food-grade purity is not required.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc	%	95	94.5	95.5	GC
Color (APHA)	APHA	5	—	10	APHA
Specific Gravity (20°C)	g/mL	0.7874	—	—	Hydrometer @ 25°C
Non Volatile Residue	mg/100mL	0.15	0	5	Evaporation
Iron (Fe)	ppm	0.01	0	—	ICP-MS
Acidity As Acetic	ppm	20	0	30	Titration

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Characteristic alcoholic odor
Form	Liquid	Boiling Point	173.3 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	-173.4 °F (NTP, 1992)	Flash Point	55 °F (NTP, 1992)
Specific Gravity	0.792	Solubility	Miscible with water and many organic solvents
Molecular Formula	C ₂ H ₆ O	Molecular Weight	46.07 g/mol
Vapor Pressure (20°C)	59 mmHg	Viscosity (25°C)	1.2 cP
Refractive Index (20°C)	1.361	Density (25°C)	0.789 g/mL

APPLICATIONS

1. **Analytical Chemistry** — Serves as a reliable mobile phase component in reversed-phase high-performance liquid chromatography for precise organic compound separation.
2. **Pharmaceutical Manufacturing** — Utilized effectively in the extraction of active pharmaceutical ingredients from various plant materials.
3. **Industrial Maintenance** — Functions as a powerful cleaning and degreasing agent for equipment and manufacturing surfaces, ensuring residue-free results.
4. **Energy and Fuel** — Incorporated into fuel formulations to enhance combustion efficiency and overall engine performance.

STORAGE & HANDLING

Due to its flash point of 13°C, this product is classified as a highly flammable liquid that requires storage in a cool, well-ventilated area away from heat or ignition sources. Proper containment is critical to prevent the buildup of flammable vapors and to maintain the integrity of the chemical composition.

- Store in a cool, well-ventilated area away from heat sources and open flames.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Keep away from strong oxidizers and acids to avoid hazardous reactions.
- Ensure proper personal protective equipment (PPE) is worn, including gloves and goggles.
- Avoid exposure to direct sunlight to prevent degradation of the denaturants used.

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]

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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