

### PRODUCT IDENTIFICATION



**Product Name:** Denatured Alcohol 190 Proof 3C

**CAS Number:** 64-17-5

**Molecular Formula:** C<sub>2</sub>H<sub>6</sub>O

**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 (wt%)	% v/v	95.1	92.4	—	ASTM E203
Specific Gravity (20°C)	g/mL	0.812	—	0.816	ASTM D4052
Nonvolatile Residue Mg Per 100mL	mg/100mL	1	—	5	ASTM D1353
Water Content	%	0.2	—	0.5	ASTM E203
Acidity As Acetic Acid	%	0.0010	—	0.0050	ASTM D1613
Appearance	—	Clear, colorless liquid	—	—	Visual
Methanol Pct	% v/v	4.5	3.5	5.5	GC
Methyl Isobutyl Ketone Ppm	ppm	0.5	0	1	GC

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

### PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance</b>	Clear, colorless liquid	<b>Odor</b>	Characteristic alcoholic odor
<b>Form</b>	Liquid	<b>Boiling Point</b>	78°C (172.4°F)
<b>Melting / Freezing Point</b>	-114°C (-173.2°F)	<b>Flash Point</b>	13°C (55.4°F)
<b>Specific Gravity</b>	0.792	<b>Solubility</b>	Miscible with water and many organic solvents
<b>Molecular Formula</b>	C <sub>2</sub> H <sub>6</sub> O	<b>Molecular Weight</b>	46.07 g/mol
<b>Vapor Pressure (20°C)</b>	59 mmHg	<b>Viscosity (25°C)</b>	1.2 cP
<b>Refractive Index (20°C)</b>	1.361	<b>Density (25°C)</b>	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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Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | [www.alliancechemical.com](http://www.alliancechemical.com)

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