

PRODUCT IDENTIFICATION



Product Name: Denatured Alcohol 190 Proof 3C Technical Grade

CAS Number: 64-17-5

Molecular Formula: C₂H₆O

Molecular Weight: 46.07 g/mol

Grade: Technical Grade

Purity / Concentration: 95%

Synonyms: Ethyl Alcohol, Ethanol

PRODUCT OVERVIEW

Denatured Alcohol 190 Proof 3C Technical Grade is a versatile, high-purity solvent featuring a 95% concentration and a low color profile of 5 APHA. This clear, colorless liquid is engineered for industrial efficacy, offering consistent performance for demanding manufacturing and laboratory applications.

Grade Significance: Technical Grade signifies that this product is formulated for industrial and manufacturing utility where high performance is required, though it is not intended for human consumption or food-grade applications.

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	0.8145	0.8125	0.8165	Hydrometer @ 20°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** — Functions as a critical mobile phase component in reversed-phase high-performance liquid chromatography to facilitate the precise separation of organic compounds.
2. **Pharmaceutical Manufacturing** — Utilized effectively in the extraction processes required to isolate active pharmaceutical ingredients from complex plant materials.
3. **Industrial Maintenance** — Acts as a powerful cleaning and degreasing agent to maintain the integrity of manufacturing equipment and production surfaces.
4. **Energy and Fuel** — Incorporated into specialized fuel formulations to improve combustion efficiency and overall engine performance.

STORAGE & HANDLING

Due to its flash point of 55 °F, this product is classified as a highly flammable liquid that must be stored in a cool, well-ventilated area away from heat sources and open flames. Proper containment is essential to prevent the accumulation of flammable vapors and to mitigate the risk of fire or serious eye irritation.

- 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 vapour
- H319: Causes serious eye irritation

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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