

PRODUCT IDENTIFICATION



Product Name: Acetic Acid Glacial - Food Grade

CAS Number: 64-19-7

Molecular Formula: $C_2H_4O_2$

Molecular Weight: 60.05 g/mol

Grade: Food Grade

Purity / Concentration: 100%

Synonyms: Ethanoic Acid, Vinegar Concentrate

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Food Grade Glacial Acetic Acid (CAS 64-19-7), a versatile and clear liquid essential for food preservation and acidification. With an assay of 99.9% and strictly controlled impurity levels, this product ensures consistency and safety for sensitive manufacturing processes.

Grade Significance: Food Grade designation ensures that the product meets stringent purity standards and contains no harmful levels of contaminants like heavy metals, making it safe for direct use in consumables.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	99.9	99.7	—	Titration
Color (APHA/Hazen)	APHA	3.9	—	5	Spectrophotometry
Specific Gravity (20°C)	g/mL	1.051	1.0505	1.052	Hydrometer @ 20°C
Non-Volatile Residue	%	≤ 0.001 %	—	—	Residue on Ignition
Water Karl Fischer	%	0.06	—	0.15	Karl Fischer
Arsenic Antimony As As	ppm	0.5	0	1	ICP-MS
Heavy Metals As Pb	ppm	≤ 0.5 ppm	—	—	ICP-MS (as Pb)
Iron (Fe)	ppm	≤ 0.5 ppm	—	—	ICP-MS
Lead Pb	ppm	0.2	0	0.5	ICP-MS
Chloride Cl	ppm	≤ 1 ppm	—	—	ICP
Sulfate So4	ppm	≤ 1 ppm	—	—	ICP
Acidity	%	0.05	—	1	Titration
Aldehydes	%	ND	—	0.05	Per specification
Distillation Range Width	°C	0.6	—	1	ASTM D1078
Mercury Hg	ppm	0.05	0	0.1	ICP-MS
Stability Available Oxygen	%	16.4	2	—	Stability Test
Sulfite So3	ppm	≤ 1 ppm	—	—	ICP

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless, clear liquid	Odor	Pungent, vinegar-like odor
Form	Liquid	Boiling Point	244 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	61.9 °F (NTP, 1992)	Flash Point	104 °F (NTP, 1992)
Solubility	Miscible with water, alcohol, and many organic solvents	Molecular Formula	C ₂ H ₄ O ₂
Molecular Weight	60.05 g/mol	Vapor Pressure (20°C)	11 mmHg
Viscosity (25°C)	0.89 cP	Refractive Index (20°C)	1.371
Density (25°C)	1.049 g/mL		

APPLICATIONS

1. **Food and Beverage** — Used as a preservative to inhibit microbial growth and extend the shelf life of various food products by effectively lowering pH.
2. **Culinary Manufacturing** — Acts as a primary ingredient in sauces, dressings, and marinades to provide a sharp, tangy flavor profile.
3. **Food Processing** — Utilized as an acidity regulator to precisely adjust the pH levels of food formulations to meet specific quality standards.
4. **Chemical Synthesis** — Serves as a reliable reagent in various chemical reactions and synthetic processes requiring high-purity ethanoic acid.

STORAGE & HANDLING

Proper storage is critical because Glacial Acetic Acid is a flammable liquid that can cause severe skin burns and eye damage. It must be kept in a cool, well-ventilated area away from heat sources and incompatible materials to prevent hazardous reactions and maintain the integrity of the chemical.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid contact with strong oxidizing agents and bases.
- Ensure proper ventilation when handling to minimize inhalation risks.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.

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:

- H226: Flammable liquid and vapour
- H314: Causes severe skin burns and eye damage

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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