

### PRODUCT IDENTIFICATION



**Product Name:** Acetic Acid Glacial - Food Grade

**CAS Number:** 64-19-7

**Molecular Formula:** C<sub>2</sub>H<sub>4</sub>O<sub>2</sub>

**Molecular Weight:** 60.05 g/mol

**Grade:** Food Grade

**Purity / Concentration:** 100%

**Synonyms:** Ethanoic Acid, Vinegar Concentrate

### PRODUCT OVERVIEW

Acetic Acid Glacial Food Grade is a high-purity, concentrated ethanoic acid designed for rigorous food industry standards. With a verified assay of 99.9% and minimal impurities, this versatile liquid is essential for pH control and microbial preservation in various food applications.

**Grade Significance:** Food Grade certification ensures the product meets strict purity thresholds and is free from harmful contaminants, making it safe for human consumption when used as directed in food manufacturing.

### CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.9	99.5	—	Titration
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.049	1.048	1.051	USP <841>
Residue After Ignition	%	0.0010	—	0.01	USP <281>
Water Content	%	0.08	—	0.1	Karl Fischer Titration
Heavy Metals (as Pb)	ppm	0.1	—	1	USP <231>
Iron (Fe)	ppm	0.05	—	0.2	ICP-OES
Chloride (Cl <sup>-</sup> )	ppm	1	—	1	USP <221>
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	ppm	1	—	1	USP <221>
Acetaldehyde	ppm	ND	—	5	GC
Formic Acid	%	0.01	—	0.1	Titration

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

## PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance</b>	Colorless, clear liquid	<b>Odor</b>	Pungent, vinegar-like odor
<b>Form</b>	Liquid	<b>Boiling Point</b>	118°C (244.4°F)
<b>Melting / Freezing Point</b>	16°C (60.8°F)	<b>Flash Point</b>	39°C (102.2°F)
<b>Solubility</b>	Miscible with water, alcohol, and many organic solvents	<b>Molecular Formula</b>	C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>
<b>Molecular Weight</b>	60.05 g/mol	<b>Vapor Pressure (20°C)</b>	11 mmHg
<b>Viscosity (25°C)</b>	0.89 cP	<b>Refractive Index (20°C)</b>	1.371
<b>Density (25°C)</b>	1.049 g/mL		

## APPLICATIONS

- Food Processing** — Used as a preservative to lower pH levels and inhibit the growth of spoilage-causing microorganisms.
- Condiment Manufacturing** — Serves as a key ingredient in sauces, dressings, and marinades to provide a sharp, clean acidity and enhance flavor profiles.
- Beverage Production** — Utilized to precisely adjust the acidity levels of various food-based beverage products to ensure consistency and shelf stability.
- Chemical Synthesis** — Functions as a high-purity reagent in the synthesis of food additives and flavor compounds requiring stringent purity levels.

## STORAGE & HANDLING

Proper storage is critical because glacial acetic acid is a flammable liquid with a flash point of 39°C, requiring a cool, well-ventilated area away from ignition sources. Additionally, its corrosive nature necessitates containers that prevent leakage to protect personnel from severe skin and eye damage.

- 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 vapor [Warning Flammable liquids]
- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/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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