

PRODUCT IDENTIFICATION



Product Name: Acetic Acid Glacial Technical

CAS Number: 64-19-7

Molecular Formula: C₂H₄O₂

Molecular Weight: 60.05 g/mol

Grade: Laboratory Grade

Purity / Concentration: 100%

Synonyms: Ethanoic Acid, Vinegar Acid

PRODUCT OVERVIEW

Acetic Acid Glacial Technical, Laboratory Grade, is a versatile chemical characterized by its high purity, with an assay of 99.2%. This clear, colorless liquid is commonly used to adjust pH levels in water treatment processes and as a solvent in organic synthesis. Its concentrated nature makes it a valuable reagent in laboratory settings and industrial applications.

Grade Significance: Laboratory Grade Acetic Acid Glacial indicates a high level of purity suitable for laboratory research and precise analytical work. This grade ensures minimal interference from impurities, leading to more accurate and reliable experimental results.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.2	98	—	Titration with NaOH
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.049	1.048	1.051	ASTM D4052
Residue After Ignition	%	0.0010	—	0.01	Gravimetric
Water Content	%	0.4	—	1	Karl Fischer Titration
Iron (Fe)	ppm	0.1	—	1	ICP-OES
Chloride (Cl ⁻)	ppm	1	—	5	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	2	—	10	Ion Chromatography

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Pungent, vinegar-like
Form	Liquid	Boiling Point	118°C (244°F)
Melting / Freezing Point	16°C (61°F)	Flash Point	39°C (102°F)
Solubility	Highly water soluble	Molecular Formula	C ₂ H ₄ O ₂
Molecular Weight	60.05 g/mol	Vapor Pressure (20°C)	11 mmHg
Viscosity (25°C)	1.2 cP	Refractive Index (20°C)	1.371
Density (25°C)	1.049 g/mL		

APPLICATIONS

1. **Water Treatment** — Acetic acid is used to adjust pH levels in various water treatment processes. Maintaining the correct pH is crucial for the effectiveness of disinfection and coagulation processes, ensuring water safety and quality.
2. **Chemical Synthesis** — As a solvent, acetic acid is used in the production of various organic compounds. Its ability to dissolve a wide range of substances makes it essential in the synthesis of pharmaceuticals, plastics, and other chemical products.
3. **Food Industry** — Acetic acid acts as a food preservative and flavoring agent. It inhibits the growth of spoilage microorganisms, extending the shelf life of food products, and provides a characteristic tangy flavor.
4. **Laboratory Reagent** — Acetic acid serves as a reagent in various chemical reactions and analyses. Its consistent purity ensures reliable results in research and quality control applications.
5. **Textile Industry** — Acetic acid is used in textile dyeing and finishing processes. It helps to fix dyes onto fabrics, improving colorfastness and overall product quality.
6. **Pharmaceutical Industry** — Acetic acid is used in the production of certain pharmaceutical products. Its solvent properties and reactivity make it useful in the synthesis of drug compounds.

STORAGE & HANDLING

Acetic Acid Glacial is a flammable liquid and vapor, requiring storage in a cool, well-ventilated area away from heat and ignition sources. Because it causes severe skin burns and eye damage, proper containment prevents accidental spills and exposure, ensuring a safe environment. Storing in compatible containers also prevents degradation of the product and maintains its purity.

- Store in a cool, dry, well-ventilated area away from incompatible materials.
- Use containers made of HDPE or glass to avoid reactions.
- Keep away from strong oxidizers and bases to prevent hazardous reactions.
- Ensure proper PPE, including gloves and goggles, is worn when handling.
- Avoid exposure to light and heat to maintain product stability.

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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