

PRODUCT IDENTIFICATION



Product Name: 5% Diluted Acetic Acid Food Grade

CAS Number: 64-19-7

Molecular Formula: C₂H₄O₂

Molecular Weight: 60.05 g/mol

Grade: Food Grade

Purity / Concentration: 5%

Synonyms: Vinegar, Acetic Acid Solution

PRODUCT OVERVIEW

Alliance Chemical provides high-quality 5% Diluted Acetic Acid, a versatile food-grade solution formulated for consistent acidity and purity. With an assay of 5.05% and a low APHA color rating of 5, this product serves as a reliable ingredient for food preservation, flavor enhancement, and industrial cleaning applications.

Grade Significance: Food Grade certification guarantees that this acetic acid meets stringent purity standards, ensuring it is safe for human consumption and free from harmful heavy metals or contaminants.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	5.05	4.8	5.2	Titration with NaOH
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	1.003	—	—	USP <841>
Residue After Ignition	%	0.0010	—	0.01	FCC Method
Heavy Metals (as Pb)	ppm	0.05	—	1	ICP-MS
Chloride (Cl ⁻)	ppm	0.1	—	1	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	0.2	—	5	Ion Chromatography
Aldehydes As Hcho	ppm	0.1	—	5	Spectrophotometry
Formic Acid	ppm	1	—	10	HPLC

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Pungent, vinegar-like odor
Form	Liquid	Boiling Point	100°C (212°F)
Flash Point	11°C (52°F)	Solubility	Completely soluble in water
Molecular Formula	C ₂ H ₄ O ₂	Molecular Weight	60.05 g/mol
Vapor Pressure (20°C)	15 mmHg	Viscosity (25°C)	1.0 cP
Refractive Index (20°C)	1.373	Density (25°C)	1.005 g/mL

APPLICATIONS

1. **Food Processing** — Utilized as a natural preservative in pickling and canning to effectively inhibit microbial growth.
2. **Culinary Manufacturing** — Commonly integrated into salad dressings and marinades to provide a clean, sharp flavor profile.
3. **Food Science** — Used as an acidity regulator to stabilize the pH levels of various food products for shelf-life extension.
4. **Industrial Cleaning** — Employed in specialized cleaning solutions due to its mild acidity and effective descaling properties.

STORAGE & HANDLING

Proper storage is critical because this product is a flammable liquid and vapor with a flash point of 11°C. It must be kept in a cool, well-ventilated area away from heat sources and ignition points to prevent fire hazards and ensure product stability.

- 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) such as 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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