

PRODUCT IDENTIFICATION



Product Name: 10% Vinegar - Concentrated Industrial Strength

CAS Number: 64-19-7

Molecular Formula: $C_2H_4O_2$

Molecular Weight: 60.05 g/mol

Grade: Technical

Purity / Concentration: 10%

Synonyms: Diluted Acetic Acid, Industrial Vinegar

PRODUCT OVERVIEW

Alliance Chemical's 10% Vinegar is a high-quality Technical grade diluted acetic acid solution, offering a precise 10.1% assay and exceptional purity with heavy metals not detected. This clear, colorless liquid serves as a reliable and versatile solution for industrial pH adjustment, cleaning, and chemical synthesis.

Grade Significance: Technical grade indicates that this product is manufactured for industrial and commercial applications where performance and consistency are prioritized, rather than for pharmaceutical or reagent-grade laboratory use.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	10	9.5	10.5	Titration
Color (APHA/Hazen)	APHA	3	—	10	Spectrophotometry
Specific Gravity (20°C)	g/mL	1.0033	1.0003	1.0063	Hydrometer @ 25°C
Residue On Evaporation	ppm	15	0	50	Evaporation
Water Karl Fischer	%	0.01	—	0.02	Karl Fischer
Chloride Cl	ppm	≤ 0.1 ppm	—	—	ICP
Sulfate So4	ppm	≤ 0.1 ppm	—	—	ICP
Acid Value	mg KOH/g	≤ 0.01 mg KOH/g	—	—	Titration
Acidity	%	0.01	—	0.02	Titration
Aldehydes	%	≤ 0.01 %	—	—	Per specification
Deg Content	%	1.65	0	—	GC
Distillation Range	—	0.06	—	0.1	Per specification
Free Acid	%	ND	0	0.01	Titration
Sulfite So3	ppm	≤ 0.1 ppm	—	—	ICP

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	Not characterized for the 10% solution
Melting / Freezing Point	Not characterized for the 10% solution	Flash Point	104 °F (NTP, 1992)
Specific Gravity	1.013	Solubility	Fully water soluble
Molecular Formula	C ₂ H ₄ O ₂	Molecular Weight	60.05 g/mol
Vapor Pressure (20°C)	Approximately 15 mmHg (for 10% solution, 20°C reference)	Viscosity (25°C)	1.0 cP
Refractive Index (20°C)	1.373	Density (25°C)	1.005 g/mL

APPLICATIONS

- 1. Water Treatment** — This product is used to effectively lower pH levels in water systems, ensuring optimal chemical balance and regulatory compliance.
- 2. Food and Beverage** — It serves as a controlled flavoring agent and preservative, meeting the necessary purity standards for food-grade applications.
- 3. Industrial Cleaning** — The acidic nature of this solution allows for the efficient removal of mineral deposits, scale, and stubborn stains from industrial equipment.
- 4. Chemical Manufacturing** — It acts as a consistent and reliable reactant in the synthesis of various organic compounds, supporting complex chemical production processes.

STORAGE & HANDLING

Proper storage is essential because this product is a flammable liquid and vapor, necessitating a cool, well-ventilated area away from heat sources or ignition. Maintaining strict containment prevents potential skin burns and eye damage, ensuring the safety of your facility and staff.

- Store in a cool, dry place away from direct sunlight.
- Use materials compatible with acetic acid, such as HDPE or glass containers.
- Avoid contact with strong oxidizers and bases.
- Ensure proper ventilation when handling to minimize inhalation exposure.
- 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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