

PRODUCT IDENTIFICATION



Product Name: 10% Vinegar - Concentrated Industrial Strength

CAS Number: 64-19-7

Molecular Formula: C₂H₄O₂

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 (wt%) | % | 10.1 | 9.5 | 10.5 | Titration with NaOH |
| Color (APHA) | APHA | 5 | — | 10 | ASTM D1209 |
| Specific Gravity (20°C) | g/mL | 1.012 | — | — | USP <841> |
| Residue After Ignition | % | 0.0010 | — | 0.01 | Gravimetric |
| Heavy Metals (as Pb) | ppm | ND | — | 1 | ICP-OES |
| 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 odor |
| Form | Liquid | Boiling Point | 118°C (244.4°F) |
| Melting / Freezing Point | 16°C (60.8°F) | Flash Point | 39°C (102.2°F) |
| 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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