

PRODUCT IDENTIFICATION



Product Name: 20% Diluted Acetic Acid Food Grade

CAS Number: 64-19-7

Molecular Formula: $C_2H_4O_2$

Molecular Weight: 60.05 g/mol

Grade: Food Grade

Purity / Concentration: 20%

Synonyms: Vinegar Concentrate, Acetic Acid Solution

PRODUCT OVERVIEW

Alliance Chemical offers high-purity 20% Diluted Acetic Acid, a versatile food-grade solution essential for professional food processing and sanitation. With a strictly controlled lead content of 0.2 ppm and a clean APHA color rating of 3, this product ensures consistency and safety in your culinary and preservation applications.

Grade Significance: Food Grade certification guarantees that the product meets stringent purity standards and contains no harmful contaminants, making it safe for direct use in consumables. This provides peace of mind that your ingredients adhere to rigorous health and safety regulations.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	20	19.5	20.5	Titration
Color (APHA/Hazen)	APHA	3	—	10	Spectrophotometry
pH	—	2.13	2.03	2.23	pH Meter
Specific Gravity (20°C)	g/mL	1.026	1.024	1.028	Hydrometer @ 20°C
Residue On Evaporation	ppm	15	0	50	Evaporation
Arsenic Antimony As As	ppm	0.5	0	1	ICP-MS
Lead Pb	ppm	0.2	0	0.5	ICP-MS
Chloride Cl	ppm	≤ 0.2 ppm	—	—	ICP
Sulfate So4	ppm	≤ 0.2 ppm	—	—	ICP
Mercury Hg	ppm	0.05	0	0.1	ICP-MS
Sulfite So3	ppm	0.18	—	0.2	ICP

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Pungent, vinegar-like
Boiling Point	100°C (212°F)	Flash Point	11°C (52°F)
Specific Gravity	~1.026	Solubility	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)	1.2 cP
Refractive Index (20°C)	1.373	Density (25°C)	1.05 g/mL
Partition Coefficient (log P)	-0.3	Decomposition Temp.	Not applicable

APPLICATIONS

- Food Preservation** — Used as a preservative to effectively inhibit microbial growth, extending the shelf life of various packaged food products.
- Culinary Production** — Commonly utilized to enhance flavor profiles in dressings, sauces, and marinades by providing a balanced acidic tang.
- Food Science** — Serves as a reliable agent for adjusting pH levels in food products, ensuring optimal taste, texture, and product stability.
- Commercial Sanitation** — Acts as an effective, natural-based cleaning agent for sanitizing kitchen surfaces and food-grade processing equipment.

STORAGE & HANDLING

Proper storage is critical because this 20% acetic acid solution is classified as hazardous, causing severe skin burns and eye damage upon contact. It must be kept in a cool, well-ventilated area away from incompatible substances to prevent chemical reactions and ensure the integrity of the container.

- 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:

- H314: Causes severe skin burns and eye damage

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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