

PRODUCT IDENTIFICATION



Product Name: Acetone ACS Grade
CAS Number: 67-64-1
Molecular Formula: C₃H₆O
Molecular Weight: 58.08 g/mol
Grade: ACS Grade
Purity / Concentration: 99.5%
Synonyms: 2-Propanone, Dimethyl ketone

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Acetone ACS Grade, a clear and colorless solvent featuring a 99.9% assay and exceptionally low residue levels. This premium reagent is essential for sensitive laboratory applications, including chromatography and spectroscopy, where chemical consistency is critical for accurate results.

Grade Significance: ACS Grade signifies that the product meets the rigorous purity standards set by the American Chemical Society, ensuring it is suitable for use in demanding laboratory and analytical environments.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.9	99.5	—	GC-FID
Color (APHA)	APHA	3	—	5	ASTM D1209
Specific Gravity (20°C)	g/mL	0.79	—	—	ASTM D4052
Residue After Evaporation	%	0.0005	—	0.0010	Gravimetric
Water Content	%	0.15	—	0.3	Karl Fischer Titration
Iron (Fe)	ppm	0.05	—	0.5	ICP-OES
Chloride (Cl ⁻)	ppm	0.1	—	1	Ion Chromatography
Phosphate (PO ₄ ³⁻)	ppm	0.05	—	1	Spectrophotometry
Sulfate (SO ₄ ²⁻)	ppm	0.2	—	1	Ion Chromatography
Substances Reducing KmnO ₄	—	Passes Test	—	—	ACS Test
Acidity As Acetic Acid	%	0.0005	—	0.0010	Titration
Aldehydes As Hcho	ppm	1	—	2	Spectrophotometry
Alkalinity As Nh ₃	%	0.0002	—	0.0003	Titration

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Sweet, characteristic odor
Form	Liquid	Boiling Point	56°C (132.8°F)
Melting / Freezing Point	-94°C (-137.2°F)	Flash Point	-17°C (1.4°F)
Specific Gravity	0.791	Solubility	Soluble in water, alcohols, ether, and many other organic solvents
Molecular Formula	C ₃ H ₆ O	Molecular Weight	58.08 g/mol
Vapor Pressure (20°C)	180 mmHg	Viscosity (25°C)	0.32 cP
Refractive Index (20°C)	1.359	Density (25°C)	0.784 g/mL

APPLICATIONS

- Analytical Chemistry** — Used as a high-purity mobile phase component in reversed-phase HPLC to ensure precise separation of complex organic compounds.
- Spectroscopy** — Serves as an ideal baseline solvent for UV-Vis spectroscopy due to its low UV cutoff wavelength and minimal impurity profile.
- Manufacturing** — Utilized as a high-efficiency solvent for precision cleaning and degreasing of metal parts and industrial surfaces.
- Pharmaceuticals** — Employed in liquid-liquid extraction processes to effectively isolate and purify pharmaceutical intermediates.

STORAGE & HANDLING

Due to its high flammability and low flash point of -17°C, this acetone must be stored in a cool, well-ventilated area away from all ignition sources. Proper containment is essential to prevent the accumulation of flammable vapors and to maintain the chemical integrity of the high-purity solvent.

- Store in a cool, well-ventilated area away from heat sources.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper PPE is worn, including gloves and goggles, when handling.
- Keep away from open flames and sources of ignition due to flammability.

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:

- H225: Highly Flammable liquid and vapor [Danger Flammable liquids]
- H319: Causes serious eye irritation [Warning Serious eye damage/eye irritation]
- H336: May cause drowsiness or dizziness [Warning Specific target organ toxicity, single exposure; Narcotic effects]

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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