

PRODUCT IDENTIFICATION



Product Name: Cyclohexanone ACS Grade
CAS Number: 108-94-1
Molecular Formula: C₆H₁₀O
Molecular Weight: 98.14 g/mol
Grade: ACS Grade
Purity / Concentration: Not Available
Synonyms: 2-Cyclohexanone, Cyclohexanone 99%

PRODUCT OVERVIEW

Cyclohexanone ACS Grade is a high-purity, colorless solvent characterized by an exceptional assay of 99.9% and extremely low impurity levels. It serves as a vital component in analytical chemistry, industrial manufacturing, and pharmaceutical extraction processes.

Grade Significance: ACS Grade signifies that this product meets the stringent purity standards set by the American Chemical Society, ensuring it is suitable for demanding laboratory and analytical applications where high precision is required.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.9	99.8	—	GC-FID
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	0.946	0.944	0.947	USP <841>
Residue After Ignition	%	0.0010	—	0.0050	ACS
Water Content	%	0.02	—	0.1	Karl Fischer Titration
Heavy Metals (as Pb)	ppm	0.1	—	1	ICP-OES
Iron (Fe)	ppm	0.05	—	0.2	ICP-OES
Chloride (Cl ⁻)	ppm	0.1	—	5	Ion Chromatography
Substances Darkened By H ₂ SO ₄	—	Pass	—	—	ACS

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless liquid	Odor	Sweet, pungent odor
Form	Liquid	Boiling Point	155°C (311°F)
Melting / Freezing Point	-44°C (-47.2°F)	Flash Point	44°C (111.2°F)
Specific Gravity	0.948	Solubility	Soluble in water, alcohols, ethers, and most organic solvents
Molecular Formula	C ₆ H ₁₀ O	Molecular Weight	98.14 g/mol
Vapor Pressure (20°C)	4.4 mmHg	Viscosity (25°C)	0.89 cP
Refractive Index (20°C)	1.428	Density (25°C)	0.948 g/mL

APPLICATIONS

1. **Analytical Chemistry** — Functions as a reliable mobile phase component in reversed-phase high-performance liquid chromatography to achieve precise separation of organic compounds.
2. **Chemical Manufacturing** — Acts as a critical chemical intermediate in the synthesis of nylon and various high-performance synthetic fibers.
3. **Coatings and Adhesives** — Utilized as a powerful solvent in paints and industrial coatings due to its superior ability to dissolve a wide array of resins and polymers.
4. **Pharmaceuticals** — Employed in the delicate extraction process of active pharmaceutical ingredients from complex plant-based raw materials.

STORAGE & HANDLING

Due to its flash point of 44°C, Cyclohexanone is classified as a flammable liquid and must be stored in a cool, well-ventilated area away from heat sources or open flames. Proper sealing prevents vapor accumulation and ensures the product maintains its high-purity assay by avoiding environmental contamination.

- Store in a cool, well-ventilated area away from heat sources.
- Use containers made of HDPE or glass to avoid chemical reactions.
- Keep away from strong oxidizers and acids to prevent hazardous reactions.
- Ensure proper PPE including gloves and goggles are worn when handling.
- Avoid exposure to light and moisture to maintain product integrity.

AVAILABLE PACKAGING

- 1 Liter
- 5 Gallon
- 55 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Warning**



Hazard Statements:

- H226: Flammable liquid and vapor [Warning Flammable liquids]
- H332: Harmful if inhaled [Warning Acute toxicity, inhalation]

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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