

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 solvent characterized by a minimum 99% assay and exceptionally low impurity levels, such as 5 APHA color and 0.015% water content. This colorless liquid serves as a critical chemical intermediate and versatile solvent across various industrial and analytical processes.

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

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Fid	%	99	99	100.0	GC-FID
Color (APHA)	APHA	5	—	10	ASTM D1209
Specific Gravity (20°C)	g/mL	0.9478	0.9458	0.9498	Hydrometer @ 20°C
Residue On Evaporation	ppm	6	—	20	Evaporation
Water Karl Fischer	%	0.015	—	0.05	ASTM E203 / ISO 6296
Acidity As Acetic	ppm	7	—	30	Titration

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	312.1 °F at 760 mmHg (NTP, 1992)
Melting / Freezing Point	3 °F (NTP, 1992)	Flash Point	111 °F (NTP, 1992)
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** — It is frequently utilized as a mobile phase component in reversed-phase high-performance liquid chromatography to effectively separate complex organic compounds.
2. **Coatings and Adhesives** — Due to its powerful solvency, it is used to dissolve a wide range of resins, paints, and adhesive formulations to ensure optimal application consistency.
3. **Synthetic Fiber Manufacturing** — This chemical serves as a vital intermediate in the large-scale production of nylon and other synthetic fibers.
4. **Pharmaceuticals** — It is employed in the specialized extraction processes required to isolate active pharmaceutical ingredients from various plant materials.

STORAGE & HANDLING

Proper storage is essential because Cyclohexanone is a flammable liquid with a flash point of 111°F, requiring a cool, well-ventilated area away from ignition sources. Maintaining these conditions prevents the accumulation of hazardous vapors and ensures the chemical remains stable for its intended use.

- 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: **Danger**



Hazard Statements:

- H226: Flammable liquid and vapour
- H302: Harmful if swallowed
- H312: Harmful in contact with skin
- H315: Causes skin irritation
- H318: Causes serious eye damage
- H332: Harmful if inhaled
- H335: May cause respiratory 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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