

PRODUCT IDENTIFICATION



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

PRODUCT OVERVIEW

Cyclohexanone Technical Grade is a versatile, high-purity solvent featuring a 99.1% assay and a low moisture content of 0.05%. This colorless liquid is widely utilized in industrial applications, particularly as a key intermediate in the production of nylon and as a robust solvent for complex resins.

Grade Significance: Technical Grade indicates a product optimized for industrial and manufacturing processes where high performance and consistency are required at a cost-effective scale. It provides the ideal balance of purity and utility for large-scale chemical synthesis and formulation.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay Gc Fid	%	99.9	99	—	GC-FID
Color (APHA)	APHA	3	—	5	ASTM D1209
Specific Gravity (20°C)	g/mL	0.8055	0.804	0.807	Hydrometer @ 25°C
Non-Volatile Residue	%	0.015	0	0.05	Residue on Ignition
Water Karl Fischer	%	0.033	—	0.05	ASTM E203 / ISO 6296

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless liquid with a pungent odor	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, ethanol, ether, and other 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)	0.9 cP
Refractive Index (20°C)	1.428	Density (25°C)	0.948 g/mL

APPLICATIONS

1. **Paints and Coatings** — It acts as a powerful solvent for a broad range of resins, ensuring consistent viscosity and superior film-forming properties in industrial coatings.
2. **Polymer Manufacturing** — Cyclohexanone serves as a critical chemical intermediate in the synthesis of nylon 6 and nylon 66, which are essential for high-strength fiber production.
3. **Pharmaceuticals** — It is utilized in various extraction and purification processes, providing the necessary chemical stability for active ingredient isolation.
4. **Laboratory Research** — Researchers rely on this compound as a precursor for the synthesis of complex organic molecules and specialized chemical reagents.

STORAGE & HANDLING

Due to its classification as a flammable liquid, Cyclohexanone must be stored in a cool, well-ventilated area away from open flames or ignition sources. Maintaining proper storage conditions is essential to prevent the accumulation of flammable vapors and to ensure the chemical remains stable for industrial use.

- Store in a cool, dry, well-ventilated area away from heat sources.
- Use containers made of HDPE or glass to avoid chemical reactions.
- Keep away from strong oxidizing agents and acids.
- Ensure proper personal protective equipment (PPE) such as gloves and goggles are worn during handling.
- Avoid exposure to light to maintain product stability.

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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com

Disclaimer: The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.