TECHNICAL DATA SHEET

Cyclohexanone Technical Grade

Revised: 04/27/2026

PRODUCT IDENTIFICATION

Product Name: Cyclohexanone Technical Grade
CAS Number: 108-94-1
Molecular Formula: $C_6H_{10}O$
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 (wt%)	%	99.1	98	—	GC
Color (APHA)	APHA	10	—	20	ASTM D1209
Specific Gravity (20°C)	g/mL	0.946	0.944	0.947	ASTM D4052
Residue After Ignition	%	0.0010	—	0.0050	Gravimetric
Water Content	%	0.05	—	0.1	ASTM E203
Acidity As Acetic Acid	%	0.0010	—	0.0050	Titration

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**	155°C (311°F)
Melting / Freezing Point	-45°C (-49°F)	**Flash Point**	44°C (111.2°F)
Specific Gravity	0.948	**Solubility**	Soluble in water, ethanol, ether, and other organic solvents
Molecular Formula	$C_6H_{10}O$	**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.

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