

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Cyclohexanone
- English Name: Cyclohexanone
- CAS Number: 108-94-1
- Formula: C₆ H₁₀ O
- Molecular Weight: 98.14 g/mol
- Product Characteristics: Colorless to pale yellow clear liquid with a mint-like odor. High-purity cyclic ketone solvent with excellent solubility for polar and non-polar compounds. Chemically stable under normal conditions, flammable, and moderately toxic.

2. Technical Specifications

Item	Specification
Appearance	Colorless to pale yellow clear liquid
Purity (GC)	≥ 99.5%
Water Content	≤ 0.1%
Density (20°C)	0.947-0.949 g/cm ³
Boiling Range	154.0-156.0°C
Flash Point (Closed Cup)	44°C
Viscosity (20°C)	2.2 mPa·s
Non-Volatile Residue	≤ 0.005%
Heavy Metals (Pb)	≤ 0.5 ppm
Heavy Metals (As)	≤ 0.1 ppm
Acidity (as CH ₃ COOH)	≤ 0.001%

3. Product Advantages

1. High Purity: Low impurity content ensures stable performance in polymer synthesis and formulations.
2. Excellent Solvency: Dissolves resins, plastics, and organic intermediates, ideal for industrial processes.
3. Low Volatility: Long-lasting effect in coatings and adhesives, reducing reapplication frequency.
4. Chemical Stability: Inert to most common reagents under standard operating conditions.

4. Application Fields

- Chemical Synthesis: Precursor for adipic acid, caprolactam, and pharmaceutical intermediates.
- Polymer Industry: Solvent for nylon, PVC, and synthetic rubber processing.
- Industrial Solvent: Coatings, inks, adhesives, and paint thinners.
- Laboratory Research: Analytical reagent, reaction solvent, and extraction agent.

5. Usage Methods

- Dosage: Adjust according to application (20-100% concentration; dilute with compatible solvents if needed).
- Application: Use in closed systems for synthesis; mix with other solvents for formulation.
- Optimal Conditions: Operate at 15-30°C in well-ventilated areas; avoid ignition sources.

6. Packaging & Storage

- Packaging Specifications: 5L HDPE cans, 20L steel drums, 200L steel drums, 1000L IBC totes (UN-approved).
- Storage Conditions: Store in cool, dry, well-ventilated warehouses (temperature $\leq 30^{\circ}\text{C}$). Keep sealed, away from heat, sparks, and oxidizing agents.
- Shelf Life: 12 months (unopened, under specified storage conditions).
- Transportation: Classified as flammable hazardous goods; transport per relevant regulations.

7. Safety & Protection

- Flammable and moderately toxic: No smoking near storage/use areas; prohibit open flames.
- Wear appropriate PPE: Chemical safety goggles, nitrile rubber gloves, protective clothing, and organic vapor respirator.
- Avoid inhalation and skin contact; ensure local exhaust ventilation.
- In case of exposure, follow first aid measures in MSDS and seek medical attention promptly.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch is accompanied by a COA for compliance verification.
- Provide technical support for safe application and process optimization.