Cyclohexanone

Product Number C 8390
Store at Room Temperature

Product Description
Molecular Formula: C₆H₁₀O
Molecular Weight: 98.14
CAS Number: 108-94-1
Density: 0.9478 g/ml (25 °C)¹
Boiling point: 155 °C (760 torr)¹
Melting point: -32.1 °C¹
Synonyms: ketohexamethylene, pimelic ketone

Cyclohexanone is a solvent that is used in organic synthesis. It is obtained from cyclohexanol by catalytic dehydrogenation or by oxidation; the latter process gives adipic acid as an additional product. It may also be produced from cyclohexane by oxidation, which gives both cyclohexanone and cyclohexanol as products.¹

Notable uses of cyclohexanone include the production of adipic acid for nylon and of caprolactam. Cyclohexanone is also a solvent for cellulose acetate, nitrocellulose, natural resins, vinyl resins, polyvinyl chloride and its copolymers, methacrylate ester polymers, waxes, and fats.¹

Cyclohexanone has been investigated in the potential use of ionic liquids in liquid membranes for the selective transport of organic molecules.² Studies of the nanocatalyst-mediated conversion of cyclohexanone to its oxime and caprolactam have been published.³,⁴

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in ethanol (0.1 ml/ml, 10% v/v), yielding a clear, colorless solution. Cyclohexanone is generally miscible with ether and other common organic solvents. This product is also soluble in water (87 mg/ml).¹

References
1. The Merck Index, 12th ed., Entry# 2795.

GCY/NSB 1/03

Sigma brand products are sold through Sigma-Aldrich, Inc. Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.