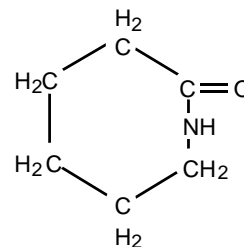


ε - Caprolactam - Liquid

(2 – Oxo-hexamethylenimine)



Formula
 C₆H₁₁ON
 Molecular weight: 113.16
 CAS No. 105-60-2

Appearance ε-Caprolactam is a colorless liquid at temperatures above melting point.

Specifications	Parameter	Value	Method of Analysis	Reference
	Colour [50% aqueous solution]	max 5° HAZEN	CAP-1373 SU	ISO 8112
	Absorbance [290 nm, 50 % aq. solution, 1 cm cell]	max 0.05	CAP-0621 SU	ISO 7059
	Permanganate Absorption Number	max. 4.0	CAP-1892-SU	ISO 8660
	Alkalinity	max 0.05 mmol/kg	CAP-1890 SU	
	Acidity	max 0.05 mmol/kg	CAP-1890 SU	
	Volatile bases	max 0.50 mmol/kg	CAP-0686-SU	ISO 8661
	Sulphate ash	max 10 mg/kg	CAP-1971-SU	
	Insolubles in water	max 5 mg/kg	CAP-1972-SU	
	Iron	max 0.5 mg/kg	CAP-1621-SU	
	Water	max 0.05 w/w%	CAP-1797-SU	ISO 760
	Solidification/Melting point (dry basis)	min 69.0°C	CAP-1973-SU	ISO 7060

Physical properties	Parameter	Value	Unit
Density	at 80 °C	1013.5	kg/m ³
	at 100 °C	998.3	kg/m ³
Viscosity	at 80 °C	8.52	mPa.s
	at 100 °C	4.87	mPa.s
Boiling point at 1013 mbar		270	° C
Vapor Pressure at 70°C		± 0.5	mbar
Flash point (closed cup)		139	° C
Ignition temperature		375	° C

Applications ε-Caprolactam is a monomer used principally in the manufacturing of nylon-6 polymer-copolymer by the hydrolytic polymerization process.

Packing, Liquid
 Road tank cars
 Rail tank cars
 Tank containers

Freight Classification Chemicals N.O.I.B.N., vIz: Caprolactam, STCC 28-182-17 NMFC 6000 Class 70

DSM Fibre Intermediates

Product Data Sheet

DOT Regulations	None
HMIS Ratings	Health 1 Slight Flammability 1 Slight Reactivity 0 Minimal
Shipping Point	Geleen – The Netherlands.
Safety precautions	The use of protective gloves, goggles and clothing is recommended in order to avoid direct contact with the skin (splashing!) when handling the hot molten product. Good ventilation or dust extraction equipment should be applied wherever vapour, dust or fine particles are present. Caprolactam monomer is easily removed from the skin and eyes by washing with water. Caprolactam is combustible and the ignition temperature is 375°C. Fires should be extinguished immediately by spraying with water.
Sales	DSM Fibre Intermediates B.V. P.O. Box 43 6130 AA Sittard, The Netherlands Telephone: +31.46.4770035 Telefax: +31.46.4770033
Warranty	DSM Fibre Intermediates solely warrants that at the time of delivery this product meets the stated specifications. All other warranties, express or implied, are hereby specifically DISCLAIMED, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE. DSM Fibre Intermediates' liability shall at all times be limited to the cost of the product involved. DSM Fibre Intermediates shall in no event be liable for consequential or incidental damages.