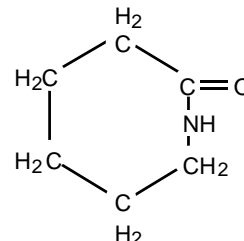


ε - Caprolactam - Flakes

(2 – Oxohexamethylenimine)

Formula

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



Appearance

ε-Caprolactam flakes is a white, hygroscopic crystalline substance with a faint characteristic odour. Readily soluble in water.

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:		
Flakes (bulk density)	600-700	kg/m ³
	36.5	lbs/cu.ft
Boiling point at 1013 mbar/760 mm Hg	270	° C
Vapor Pressure at 70°C	± 0.5	mbar
	± 0.4	mm Hg
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, Flakes

Valve Type (ex. Augusta) and Closed Sealed (ex Geleen) Polyethylene bags
Net contents: 55 lbs/25 kg.

Freight Classification

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

DSM Fibre Intermediates

Product Data Sheet

DOT Regulations	None		
HMS Ratings	Health 1 Slight Flammability 1 Slight Reactivity 0 Minimal		
Shipping Point	Geleen – The Netherlands or Augusta GA – USA .		
Safety precautions	<p>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.</p>		
Sales	<table><tr><td>DSM Fibre Intermediates B.V. P.O. Box 43 6130 AA Sittard, The Netherlands Telephone: +31.46.4770035 Telefax: +31.46.4770033</td><td>DSM Chemicals North America, Inc. 1 Columbia Nitrogen Drive P.O. Box 2451, Augusta, GA 30903 Telephone 800.825.4376 Telefax 706.849.6760</td></tr></table>	DSM Fibre Intermediates B.V. P.O. Box 43 6130 AA Sittard, The Netherlands Telephone: +31.46.4770035 Telefax: +31.46.4770033	DSM Chemicals North America, Inc. 1 Columbia Nitrogen Drive P.O. Box 2451, Augusta, GA 30903 Telephone 800.825.4376 Telefax 706.849.6760
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Warranty	<p>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.</p>		