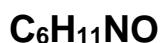
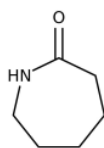


Caprolactam



Applications

Caprolactam is used for the production of fibers and filaments made of polyamide 6. Examples for end products of polyamide 6 are: clothing, carpets, ropes, fishing nets, molded plastic parts and packaging films. Engineering plastics like Durethan® or cast nylon (shaped as sheet, plates, pipes, cast or rotational molded parts) are another important market for caprolactam. It is also used in numerous special applications.

Characteristics

	Value	Unit	Method
Crystallization point	≥ 69	°C	Sim. to ISO 7060
Moisture content	≤ 0.04	% (m/m)	Karl Fischer titration
(use in anionic polymerization)	≤ 0.01	% (m/m)	
Volatile bases	≤ 0.5	meq/kg	Sim. to ISO 8661
Permanganate number	≥ 10,000	s	Spectrophotometry (3% solution)
Color of a 50% (by wt.) aqueous solution	≤ 5	APHA	Sim. to ISO 8112
Content of free bases	≤ 0.1	meq/kg	Titration
Content of free acids	≤ 0.05	meq/kg	Titration
Absorbance at 290 nm	≤ 0.05		Sim. to ISO 7059
Cyclohexanone oxime content	≤ 5	mg/kg	GC
Iron content	≤ 0.5	mg/kg	Spectrophotometry
Ash content	≤ 5	mg/kg	TGA

Storage and shelf life

Caprolactam is a very stable product and it does not lose its properties even after a long period of storage. There is no limiting shelf life, it can be stored for several weeks or months, provided it is stored as follows:

Product	Values
Liquid	Store in suitable tanks or containers from stainless steel or aluminum. All the elements of the storage and conveying systems must be grounded. Store in well isolated and tempered tanks or containers under nitrogen blanket. Ensure adequate ventilation or aspiration when handling or transferring the product.
Solid	Store in a cool, dry place and protected from moisture. Dust may explode and therefore must be removed by effective ventilation. Bags must not be damaged and should be kept closed. After partly use - which is not recommended - bags shall be resealed. It tends to agglomerate (caking) after longer transport and storage (vibrations and recurring temperature changes). This can easily be fixed by applying e.g. light impacts against the closed bag. Caking does not affect the chemical properties of the product.

Packaging

Bag (solid product)	Weight	Unit	Dimensions (remarks)
Bag	25	kg	
Pallet (40 bags)	1,000	kg	1,000 x 1,130 x 1,000 mm
Pallet (50 bags)	1,250	kg	1,400 x 1,130 x 1,380 mm
Bulk (liquid product)			
Tank	25 to 31	t	(depending on destination)

Other packaging forms and further information available on enquiry



Contact

Destination	Address
E-mail	caprolactam@lanxess.com
Phone	+49 (0)221 8885 7276

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Values

Unless specified to the contrary, the values given have been established on standardized test. The figures should be regarded as guide values only and not as binding minimum values.