CHEMICAL INTERMEDIATES

Caprolactam

Description

Caprolactam from AdvanSix is used in a variety of applications worldwide. As one the largest and most experienced suppliers of merchant-grade caprolactam, AdvanSix offers industry-leading quality, consistency and reliability of supply.

Physical and Chemical Properties

Typical Properties	Specifications
CAS Number	105-60-2
Chemical Formula	CH_2-$(CH_2)_4$-(CO)-NH
Other/Generic Names	Hexahydro-2H-azepin-2-one; 2-oxohexamethylenimine
Appearance	Solid: white flakes; Molten: colorless liquid.
Physical State	Solid at ambient temperature
Molecular Weight	113.16
Odor	Mildly disagreeable
Specific Gravity	1.02 @ 77ºC (170.6ºF); (H_2O = 1.0)
Water Solubility (miscibility), Weight % (Wt. %)	~525g /100g H_2O @ 25ºC (77ºF)
Boiling Point	270ºC (518ºF)
Melting Point	69ºC (156ºF)
Vapor Pressure	<0.001 mmHg @ 20ºC (68ºF)
Vapor Density	3.91 (Air = 1.0)
Evaporation Rate	<1 (compared to butyl acetate)
% Volatiles	100
Flash Point	142ºC (288ºF), Open cup
Storage	Store in moisture-tight containers in a cool, dry area. Store molten material at 70-80ºC (158-176ºF) under nitrogen cushion containing less than 5 ppm oxygen.

See Product Specifications table on page 2.

The values presented in this data sheet are typical values and are not to be interpreted as product specifications.

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Product Specifications

Assay	Specifications	Test Method
Water, Wt. %	0.10 max.	QALAC-0005
Free Alkalinity, meg/kg	0.05 max.	QALAC-0006
Free Acidity, meg/kg	0.05 max.	QALAC-0006
Color, APHA, 50% solution at 390 nm	5 max.	QALAC-0001
Permanganate Index (ISO)	5 max.	QALAC-0002
Permanganate Number, seconds	20,000 min.	QALAC-0009
Volatile Base (as ammonia), ppm	10 max.	QALAC-0012
Volatile Base (as ammonia), meg/kg	0.59	QALAC-0012
Ash, ppm	10 max.	QALAC-0007
Iron (as Fe), ppm	0.5 max.	QALAC-0011
Transmittance @ 290 nm, %	90 min.	QALAC-0033

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Contact AdvanSix
To learn more about caprolactam, visit
AdvanSix.com/chemicalintermediates
or call:
1-844-890-8949 (toll free, U.S./Can.)
+1-973-526-1800 (international)

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