

## Cast Nylons Nycast® CP Caprolactam/Laurinlactum Copolymer Cast Nylon

Category : Polymer , Thermoplastic , Nylon

### Material Notes:

Highly resilient, with higher tensile elongation and impact strength than standard grades, NYCAST® CP is used applications requiring an extra degree of toughness. A copolymer of caprolactam and laurinlactam, NYCAST® CP was originally developed specifically for use in ball valve seats in the oil and gas industry. NYCAST® CP with its higher elongation, superior dimensional stability and safety yellow color has found itself a superior choice for wobbler box inserts and coupling boxes in the cold rolling steel industry and mandrels covers in paper tube manufacturing plants. Data provided by the manufacturer, Cast Nylons Limited.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Cast-Nylons-Nycast-CP-CaprolactamLaurinlactum-Copolymer-Cast-Nylon.php](http://www.lookpolymers.com/polymer_Cast-Nylons-Nycast-CP-CaprolactamLaurinlactum-Copolymer-Cast-Nylon.php)

Physical Properties	Metric	English	Comments
Density	1.10 - 1.13 g/cc	0.0397 - 0.0408 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.50 - 0.60 %	0.50 - 0.60 %	24 hrs; ASTM D570
Water Absorption at Saturation	4.0 - 5.0 %	4.0 - 5.0 %	ASTM D570
Deformation	0.40 - 0.80 %	0.40 - 0.80 %	ASTM D621

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	100 - 115	100 - 115	ASTM D785
Hardness, Shore D	75 - 81	75 - 81	ASTM D2240
Tensile Strength	60.0 - 79.3 MPa	8700 - 11500 psi	ASTM D638
Elongation at Break	25 - 80 %	25 - 80 %	ASTM D638
Tensile Modulus	1.65 - 2.28 GPa	240 - 330 ksi	ASTM D638
Flexural Strength	103 - 138 MPa	15000 - 20000 psi	ASTM D790
Flexural Modulus	1.97 - 2.65 GPa	285 - 385 ksi	ASTM D790
Compressive Strength	75.8 - 86.2 MPa	11000 - 12500 psi	ASTM D695
Compressive Modulus	1.38 - 2.07 GPa	200 - 300 ksi	ASTM D695
Shear Strength	52.4 - 62.1 MPa	7600 - 9000 psi	ASTM D732
Izod Impact, Notched	0.481 - 0.747 J/cm	0.900 - 1.40 ft-lb/in	ASTM D256
Coefficient of Friction, Dynamic	0.22	0.22	ASTM D1894

Thermal Properties	Metric	English	Comments
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CTE, linear Thermal Properties	90.0 μm/m-°C Metric	50.0 μm/in-°F English	Comments
Melting Point	204 - 216 °C	400 - 420 °F	
Maximum Service Temperature, Air	98.9 °C	210 °F	Continuous
	149 °C	300 °F	Intermittent
Deflection Temperature at 0.46 MPa (66 psi)	204 - 221 °C	400 - 430 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	93.3 - 204 °C	200 - 400 °F	ASTM D648

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.7	3.7	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	3.7	3.7	
	@Frequency 1000 Hz	@Frequency 1000 Hz	ASTM D150
	3.7	3.7	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	19.7 - 23.6 kV/mm	500 - 600 kV/in	ASTM D149

## Contact Songhan Plastic Technology Co.,Ltd.

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