

NYCAST® CP 6/12

Highly resilient, with higher tensile elongation and impact strength than standard grades, NYCAST CP has proven itself in many 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. This durable material provides an economical, high-performance bridge between NYCAST 6 and NYCAST 12 formulations.

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 as well as mandrels covers used in paper tube manufacturing plants.

- High impact resistance
- High tensile elongation
- Reduced water absorption
- Lower hardness
- Easy to machine



Product Data Sheet: NYCAST® CP 6/12

Property	Units	ASTM Test Method	NYCAST® CP 6/12
Specific Gravity	g/cm ³	D 792	1.10 - 1.13
Tensile Strength	psi	D 638	9,000 - 11,000
Tensile Elongation	%	D 638	25 - 40
Tensile Modulus	psi	D 638	375,000 - 475,000
Compressive Strength	psi	D 695	12,000 - 14,000
Compressive Modulus	psi	D 695	275,000 - 375,000
Flexural Strength	psi	D 790	13,000 - 16,000
Flexural Modulus	psi	D 790	325,000 - 475,000
Shear Strength	psi	D 732	7,500 - 9,000
Notched Izod Impact	ft.lbs/in.	D 256	2.0 - 4.0
Hardness Rockwell	R	D 785	110 - 110
Hardness, Shore	D	D 2240	74 - 80
Melting Point	°F	D 3418	400 +/- 10
Coefficient of Linear Thermal Expansion	in./in./°F	D 696	4.0 - 5.0 * 10 ⁻⁵
Deformation Under Load	%	D 621	1.0 - 3.0
Deflection Temperature			
264 psi	°F	D 648	200 - 300
66 psi	°F	D 648	300 - 400
Continuous Service Temperature	°F	-	210
Intermittent Service Temperature	°F	-	300
Coefficient of Friction, Dynamic		D 1894	0.26
Water absorption			
24 Hours	%	D 570	0.2 - 0.3
Saturation	%	D 570	3.0 - 5.0
Dielectric Strength	v/mil.	D 149	500 - 600
Dielectric Constant			
60 Hz		D 150	3.7
1000 Hz		D 150	3.7
1 MHz		D 150	3.7
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