

Nycast XHA

Polyamide 6

Cast Nylons Ltd.

Message:

Two of the most widely used cast nylons in the industry, NYCAST XHA BLUE and NYCAST 6PA NATURAL have delivered successful performance - with and without lubrication - in a variety of diverse applications, particularly as a bearing material. They are lightweight, offer extremely good wear resistance, high tensile strength and high modulus of elasticity.

Other significant properties include:

- High impact resistance
- Excellent vibration resistance
- Resistance to brittleness and deterioration
- Easy machinability and abrasion resistance
- High heat distortion temperature

General Information			
Features	Good Abrasion Resistance		
	Good Wear Resistance		
	High Elasticity		
	High Heat Resistance		
	High Impact Resistance		
	High Tensile Strength		
	Machinable		
Uses	Automotive Applications		
	Bearings		
	Bushings		
	Construction Applications		
	Marine Applications		
	Mining Applications		
	Seals		
	Textile Applications		
Wear Strip			
Appearance	Blue		
Forms	Preformed Parts		
Processing Method	Casting		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15 to 1.17	g/cm³	ASTM D792
Water Absorption			ASTM D570
24 hr	0.50 to 0.60	%	
Saturation	5.0 to 6.0	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	115 to 125		ASTM D785

Durometer Hardness (Shore D)	78 to 83		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3340 to 3790	MPa	ASTM D638
Tensile Strength	82.7 to 93.1	MPa	ASTM D638
Tensile Elongation (Break)	20 to 30	%	ASTM D638
Flexural Modulus	2900 to 3450	MPa	ASTM D790
Flexural Strength	103 to 121	MPa	ASTM D790
Compressive Modulus	2070 to 2410	MPa	ASTM D695
Compressive Strength	107 to 124	MPa	ASTM D695
Shear Strength	68.9 to 75.8	MPa	ASTM D732
Coefficient of Friction (vs. Itself - Dynamic)	0.22		ASTM D1894
Deformation Under Load	0.500 to 2.50	%	ASTM D621
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	37 to 48	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	204 to 221	°C	
1.8 MPa, Unannealed	93.3 to 204	°C	
Continuous Use Temperature	121	°C	ASTM D794
Melting Temperature	227 to 238	°C	
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Service Temperature - Intermittent	166	°C	
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	20 to 24	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.70		
1 kHz	3.70		
100 kHz	3.70		

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