

# CAST NYLONS LIMITED

Discover the NYCAST® Advantage

## NYCAST® 6PA Natural & Black

Cast Nylons standard grades have delivered successful performance - with and without lubrication - in a wide variety of applications, particularly as a bearing material. They are light-weight, offer extremely good wear resistance, high tensile strength and high module of elasticity. This material is an off-white, unmodified type 6 nylon which is FDA, USDA, and 3A - dairy compliant and can be used in the food industry.

Cast Nylons Limited offers NYCAST 6PA Natural in more standard sizes than any manufacturer in the industry. The ability to cast nylon vs. extrusion allows Cast Nylons Limited to create custom Near Net Shapes with ease for special applications. Cast Nylons Limited also has the capability to produce NYCAST 6PA in 12 different colors. Custom colors are available as well.

Typical applications for NYCAST 6PA Natural would include:

- Bearings
- Gears
- Pulleys
- Sheaves
- Wear Sheaves
- Wear Pads
- Valve Seals
- Sprockets
- Wear Plates
- Thrust Washers
- Components in Food Processing Industry



# NYCAST® 6PA Natural & Black Product Specifications

Property	Units	ASTM Test Method	NYCAST® 6PA Natural & Black
Specific Gravity	g/cm <sup>3</sup>	D 792	1.15 - 1.17
Tensile Strength	psi	D 638	10,000 - 13,500
Tensile Elongation	%	D 638	20 - 55
Tensile Modulus	psi	D 638	400,000 - 550,000
Compressive Strength	psi	D 695	13,500 - 16,000
Compressive Modulus	psi	D 695	325,000 - 400,000
Flexural Strength	psi	D 790	15,000 - 17,500
Flexural Modulus	psi	D 790	420,000 - 500,000
Shear Strength	psi	D 732	10,000 - 11,000

Notched Izod Impact	ft.lbs/in.	D 256	1.5 - 2.5
Hardness Rockwell	R	D 785	110 - 115
Hardness, Shore	D	D 2240	78 - 84
Melting Point	°F	D 3418	430 +/- 10
Coefficient of Linear Thermal Expansion	in./in./°F	D 696	5.0 * 10 <sup>-5</sup>
Deformation Under Load	%	D 621	0.5 - 2.5

#### Deflection Temperature

264 psi	°F	D 648	200 - 300
66 psi	°F	D 648	300 - 400
Continuous Service Temperature	°F	-	230
Intermittent Service Temperature	°F	-	330
Coefficient of Friction, Dynamic		D 1894	0.26

#### Water Absorption

24 hours	%	D 570	0.5 - 0.6
Saturation	%	D 570	4.0 - 6.0
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

#### Compliance

FDA			X
USDA 3A			X
UL 94 HB			X



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