

Cast Nylons Nycast® 6PA-Natural Nylon 6, Food Grade

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Cast

Material Notes:

NYCAST® 6 PA-Natural along with NYCAST® 6 PA-Blue are two of the most widely used cast nylons in industry. Nylons have replaced bronze, brass, steel, and aluminum in various mechanical applications. Data provided by the manufacturer, Cast Nylons Limited. The data below are average values presented for comparison purposes. Actual property values may differ.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Cast-Nylons-Nycast-6PA-Natural-Nylon-6-Food-Grade.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	ASTM D792
Water Absorption	0.50 %	0.50 %	24 hrs; ASTM D570
Water Absorption at Saturation	5.5 %	5.5 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM D785
Hardness, Shore D	80	80	ASTM D2240
Tensile Strength, Ultimate	88.0 MPa	12800 psi	ASTM D638
Elongation at Break	20 - 45 %	20 - 45 %	ASTM D638
Tensile Modulus	3.60 GPa	522 ksi	ASTM D638
Flexural Yield Strength	114 MPa	16500 psi	ASTM D790
Flexural Modulus	3.20 GPa	464 ksi	ASTM D790
Compressive Yield Strength	114 MPa	16500 psi	10% Offset; ASTM D695
Compressive Modulus	2.20 GPa	319 ksi	ASTM D695
Shear Strength	72.0 MPa	10400 psi	ASTM D732
Izod Impact, Notched	0.400 J/cm	0.749 ft-lb/in	ASTM D256
Coefficient of Friction, Dynamic	0.22	0.22	

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 μm/m-°C	50.0 μin/in-°F	ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Melting Point	226 - 238 °C	439 - 460 °F	ASTM D789

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	110 °C	230 °F	Continuous service
	166 °C	331 °F	Intermittent service
Deflection Temperature at 0.46 MPa (66 psi)	204 - 221 °C	399 - 430 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	166 - 204 °C	331 - 399 °F	ASTM D648

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.7	3.7	
	@Frequency 60 Hz	@Frequency 60 Hz	
	3.7	3.7	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	3.7	3.7	
	@Frequency 100000 Hz	@Frequency 100000 Hz	ASTM D150
Dielectric Strength	22.0 kV/mm	559 kV/in	Short time; ASTM D149

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