

# CAST NYLON 6 - Oil Filled

## KEY FEATURES

- Low Coefficient of Friction
- Self-Lubricating
- Good Wear Resistance
- FG Grade is FDA Approved
- Improved Dimensional Stability
- High Young's Modulus

## DESCRIPTION

Oil Filled Cast Nylon 6 is carefully dispersed with an oil-based lubricant during the manufacturing process. The result is a highly crystalline, internally lubricated, high-strength polymer with enhanced wear and reduced friction properties. A cast nylon with built-in oil lubrication provides superior machinability, performance, and durability compared to other plastic and traditional bearing materials.

## TYPICAL PROPERTY VALUES

		Properties	Condition	Units	Value	ASTM Test
<b>Physical</b>		Chemical Designation				
		Filler				
		Density		g/cm <sup>3</sup>	1.14 - 1.15	D792
<b>Mechanical</b>		Tensile Modulus	@ 73 °F	PSI	375,000 - 475,000	D638
		Tensile Strength	@ 73 °F	PSI	9,500 - 11,000	D638
		Shear Strength	@ 73 °F	PSI	8,000 - 9,000	D732
		Tensile Elongation	@ 73 °F	%	35 - 55	D638
		Flexural Modulus	@ 73 °F	PSI	375,000 - 475,000	D790
		Flexural Strength	@ 73 °F	PSI	14,000 - 16,000	D790
		Compressive Modulus	@ 73 °F	PSI	325,000 - 375,000	D790
		Compressive Strength	@ 73 °F, 10% strain	PSI	13,500 - 15,000	D695
		Izod (charpy) Impact Strength	@ 73 °F	ft-lbs/in	1.4 - 1.8	D256
		Rockwell Hardness	@ 73 °F	M (R) Scale	110 - 115	D785
		Deformation Under Load		%	07 - 3.0	D 21
		Coefficient of Friction	Dynamic		0.12	D1894

### TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
<b>Thermal</b>	Vicat Softening Point				
	Melting Temperature		°F	430 +/- 10	D3418
	Heat Deflection Temperature	@ 66	°F	300 - 400	D648
	Heat Deflection Temperature	@ 264	°F	200 - 300	D648
	Service Temperature	Intermittent	°F	330	
	Service Temperature	Long Term	°F	230	
	Thermal Expansion (CLTE)		in/in/°F	5.0*10 <sup>-5</sup>	D696
<b>Electrical</b>	Dielectric Strength			500 - 600	D149
	Dielectric Constant	@60 Hz		3.7	D150
	Dielectric Constant	@1000 Hz		3.7	D150
	Dielectric Constant	@1MHz		3.7	D150
<b>Other</b>	Moisture Absorption	@ 24 hours	%	0.4 - 0.6	D570
	Moisture Absorption	@ Saturation	%	4.0 - 5.0	D570
	FDA Compliant			No	
	USDA 3A Compliant			No	
	UL 94 HB Compliant			Yes	

\*The data stated above are typical values intended for reference and comparison purposes only.

\*The data should not be used as a basis for design specifications or quality control.

\*The information is provided as a guide to the best of our knowledge and given without obligation or liability.

\*Testing under individual application circumstances is recommended.