

CAST NYLON 6 - MoS₂ Filled

KEY FEATURES

- Light Weight
- Good Wear Resistance
- Low Coefficient of Friction
- High Crystallinity
- Good Compressive Strength

DESCRIPTION

MoS₂ Filled Cast Nylon 6 is a popular choice as a dry lubricant-filled bearing material. Manufactured to be a more crystalline product with improved wear resistance, it also offers improved compressive strength.

TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
Physical	Chemical Designation				
	Filler				
	Density		g/cm ³	1.15 - 1.17	D792
Mechanical	Tensile Modulus	@ 73 °F	PSI	400,000 - 550,000	D638
	Tensile Strength	@ 73 °F	PSI	10,000 - 13,500	D638
	Shear Strength	@ 73 °F	PSI	10,000 - 11,000	D732
	Tensile Elongation	@ 73 °F	%	20 - 55	D638
	Flexural Modulus	@ 73 °F	PSI	400,000 - 520,000	D790
	Flexural Strength	@ 73 °F	PSI	15,000 - 18,000	D790
	Compressive Modulus	@ 73 °F	PSI	345,000 - 425,000	D790
	Compressive Strength	@ 73 °F, 10% strain	PSI	14,000 - 16,500	D695
	Izod (charpy) Impact Strength	@ 73 °F	ft-lbs/in	1.4 - 2.4	D256
	Rockwell Hardness	@ 73 °F	M (R) Scale	110 - 120	D785
	Deformation Under Load		%	0.5 - 2.6	D 21
	Coefficient of Friction	Dynamic		0.22	D1894

TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
Thermal	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 ⁻⁵	D696
Electrical	Dielectric Strength		v/mil	500 - 600	D149
	Dielectric Constant	@60 Hz		3.7	D150
	Dielectric Constant	@1000 Hz		3.7	D150
	Dielectric Constant	@1MHz		3.7	D150
Other	Moisture Absorption	@ 24 hours	%	0.5 - 0.6	D570
	Moisture Absorption	@ Saturation	%	4.0 - 6.0	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.