

Extruded Nylon 6/6

Unfilled

KEY FEATURES

- Very Good Slide and Wear Properties
- Good Machinability
- Broad Chemical Compatibility
- Resistant to Cleaning Agents

DESCRIPTION

Of all the unmodified nylons, Unfilled Extruded Nylon 6/6 is the strongest, most rigid, and has one of the highest melting points. The natural grade is FDA, USDA and 3A-Dairy compliant and is primarily used for food contact parts. Nylons offer extremely good wear resistance, coupled with high tensile strength and modulus of elasticity. They also have high impact resistance, a high heat distortion temperature, and resist wear, abrasion, and vibration.

TYPICAL PROPERTY VALUES

Physical	Properties	Condition	Units	Value	ASTM Test
	Density		g/cm ³	1.15	D792
	Chemical Designation			PA66	
	Filler				

Mechanical	Properties	Condition	Units	Value	ASTM Test
	Tensile Modulus	@ 73 °F	PSI	425,000	D638
	Tensile Strength	@ 73 °F	PSI	12,000	D638
	Shear Strength	@ 73 °F	PSI	10,000	D732
	Tensile Elongation @ Break	@ 73 °F	%	50	D638
	Compressive Strength	@ 73 °F, 10% strain	PSI	12,500	D695
	Flexural Modulus	@ 73 °F	PSI	450,000	D790
	Flexural Strength	@ 73 °F	PSI	15,000	D790
	Compressive Modulus	@ 73 °F	PSI	420,000	D790
	Izod (Charpy) Impact Strength	@ 73 °F	ft-lbs/in	0.6	D256
	Rockwell Hardness	@ 73 °F	M (R) Scale	85	D785
	Limiting PV		ft. lbs./in ² min	2,700	QTM 55007
Coefficient of Friction	Dynamic		0.25	QTM 55007	

Thermal	Properties	Condition	Units	Value	ASTM Test
	Heat Deflection Temperature	@ 66 PSI	°F		
	Heat Deflection Temperature	@ 264 PSI	°F	200	D648
	Thermal Conductivity		BTU-in/hr-ft ³ -°F	1.7	F433
	Service Temperature	Long Term	°F	210	
Thermal Expansion (CLTE)	-40°F to 300°F	in/in/°F	5.5*10 ⁻⁵	E-831	

Electrical	Properties	Condition	Units	Value	ASTM Test
	Dielectric Strength		V/mil	400	D149
	Surface Resistivity		ohms/square	>10 ¹³	EOS/ESD S11.11
	Dielectric Constant	@10 ⁵ Hz		3.6	D150
Dissipation Factor	@10 ⁶ Hz		0.02	D150	

Other	Properties	Condition	Units	Value	ASTM Test
	Moisture Absorption	@ 24 hrs	%	0.30	D570
	Moisture Absorption	@ Saturation	%	7	D570
	Flammability			V-2	UL 94
	FDA Compliant			Yes	
Relative Cost			\$		

• 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