



# POLYMER INDUSTRIES

## NYLON

### TYPICAL PROPERTIES

Property	Test Method	Units	NATURAL AND BLACK Unfilled Nylon 6/6	NYLON Ld MoS <sub>2</sub> Filled Nylon 6/6	NYLON Rg-30 30%Glass Filled Nylon 6/6
<b>Mechanical</b>					
Specific Gravity	ASTM-D792	---	1.14	1.16	1.33
Tensile Strength	ASTM-D638	psi	11,500	11,800	18,350
Tensile Elongation	ASTM-D638	%	60	50	4-6
Tensile Modulus	ASTM-D638	psi	410,000	500,000	1,200,000
Flexural Strength	ASTM-D790	psi	14,500	15,000	27,000
Flexural Modulus	ASTM-D790	psi	410,000	480,000	950,000
Compression Strength	ASTM-D695	psi	13,000	16,000	20,000
Izod Notched Impact	ASTM-D256	ft.- lb./in.	0.6	0.5	2.3
Rockwell Hardness	ASTM-D785	M or R scale	M80(R121)	M85(R115)	M101
<b>Thermal</b>					
Coef. Of Linear Thermal Expansion	ASTM-D696	in./in./°F	5.0x10 <sup>-5</sup>	4.0x10 <sup>-5</sup>	1.2x10 <sup>-5</sup>
Max Continuous Temp.	Internal Std.	°F	210	210	210
Heat Defl. Temp. @ 264 psi	ASTM-D648	°F	200	210	460
Melting Point	ASTM-D3418	°F	504	495	504
<b>Electrical</b>					
Dielectric Strength-Short Term	ASTM-D149	volts/mil	400	350	530
Dielectric Constant @ 60 Hz	ASTM-D150	---	5	3.7	3.5
Dielectric Constant @ 10 <sup>6</sup> Hz	ASTM-D150	---	3.6	---	3.7
Dissipation Factor @ 60 Hz	ASTM-D150	---	0.01	---	0.014
Volume Resistivity	ASTM-D257	ohm-cm	10 <sup>15</sup>	10 <sup>13</sup>	10 <sup>15</sup>
<b>Miscellaneous</b>					
Water Absorption/24 hours	ASTM-D570	%	1.2	0.7	0.7
Water Absorption @ Saturation	ASTM-D570	%	0.7	6.5	5.4
Flammability	UL-94	---	V-2	V-2	HB
Dynamic Coefficient of Friction	Internal Std.	---	0.25	0.23	0.31
<b>Agency Compliance</b>					
FDA	---	---	Yes	No	No
USDA	---	---	Yes	No	No
NSF	---	---	No	No	No

Other NYLON Specialties Available- MECHETEC im (Zytel ST801)

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