

TECHNICAL PROPERTIES OF ZL™ 1100 BLK (Cast Nylon 6, Black)

Property		Units	Test Method ASTM	Value
MECHANICAL PROPERTIES				
Specific Gravity		gm/cm ³	D-792	1.15 - 1.16
Tensile Strength	73 °F	psi	D-638	11,000 - 14,000
Tensile Modulus	73 °F	psi	D-638	350,000 - 450,000
Elongation, Break	73 °F	%	D-638	20 - 40
Flexural Strength	73 °F	psi	D-790	12,500 - 14,500
Flexural Modulus	73 °F	psi	D-790	350,000 - 450,000
Compressive Strength	73 °F	psi	D-695	15,000
Compressive Modulus		psi	D-695	400,000
Impact Strength, Notched	73 °F	ft-lbs/in	D-256	0.6 - 0.9
Hardness, Rockwell		R	D-785	R115 - R120
Hardness, Durometer, Shore D		D	2240	D78 - D83
Shear Strength		psi	D-732	10,000 - 11,000
Coefficient of Friction, against steel		-	-	0.22
THERMAL PROPERTIES				
Deflection Temperature	66 psi	°F	D-648	370
	264 psi	°F	D-648	200
Maximum Temperature - Long Term		°F	-	200
Maximum Temperature - Short Term		°F	-	300
Melting Point		°F		420
Coefficient of Linear Thermal Expansion		in/in/°F	D-696	5.0 x 10 ⁻⁵
Thermal Conductivity		Btu-in/hr-ft ² -°F	C-177	1.7
ELECTRICAL PROPERTIES				
Dielectric Strength		V/mil	D-149	500 - 600
Dielectric Constant	1 kHz	-	D-150	3.7
Dissipation Factor	1 kHz		D-150	-
Flammability			UL 94	HB
Volume Resistivity	73 °F	Ω.cm	D-257	10 ¹⁴
WATER ABSORPTION RATES				
Water Absorption at 73 °F	24 hours	%	D-570	0.6 - 1.2
	Saturation	%	D-570	5.0 - 6.0

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