

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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