Niche Polymer

PoliXL™

# PoliXL™ PA6MG30BK

Nylon 6, 30% Mineral/Fiberglass Reinforced, Black, Heat Stabilized

| Physical | DAM | Conditioned | Test Method |
|---|---|---|---|
| Specific Gravity, g/cc | 1.38 | - | D792 |
| Mold Shrinkage, % | | | D955 |
| Parallel: 23 °C | 0.4 - 0.6 | - | |
| Perpendicular :23°C | 0.8 - 1 | - | |
| Water Absorption, % | | | D570 |
| Equilibrium, 23 °C, 50% RH | 1.8 | - | |
| Ash (Mineral/Glass-fiber), % | 30 | - | D2584 |

| Mechanical | DAM | Conditioned | Test Method |
|---|---|---|---|
| Tensile Modulus, psi (MPa) | 1,090,000 (7,500) | 508,000 (3,500) | ISO 527 |
| Tensile Strength (Break), psi (MPa) | 18,000 (124) | 7,980 (55) | ISO 527 |
| Tensile Strain (Break), % | 4 | 10 | ISO 527 |
| Flexural Modulus, psi (MPa) | 1,300,000 (8,960) | - | ISO 178 |
| Flex Strength, psi (MPa) | 30,000 (209) | - | ISO 178 |

| Impact | DAM | Conditioned | Test Method |
|---|---|---|---|
| Charpy Notched Impact Strength ft-lb/in (kJ/m²) | | | ISO 179 |
| 23 ℃ | 1.12 (6) | 1.9 (10) | |
| -30 ℃ | 1 (5) | 1 (5) | |
| Charpy Unnotched Impact Strength, ft-lb/in (kJ/m²) | | | ISO 179 |
| 23°C | 7.5 (40) | 10.0 (53) | |
| -30 °C | 6.6 (35) | 6.6 (35) | |
| Notched Izod Impact Strength, ft-lb/in (kJ/m²) | | | ISO 180 |
| 23°C | 1.5 (8) | - | |
| -30 °C | - | - | |

| Thermal | DAM | Conditioned | Test Method |
|---|---|---|---|
| Heat Deflection Temperature, °F (℃) | | | ISO 75 |
| 0.45 MPa Unannealed | 416 (212) | - | |
| 1.8 MPa Unannealed | 399 (203) | - | |
| Melting Temperature, °F (℃) | 428 (220) | - | DSC |

| Flammability | DAM | Conditioned | Test Method |
|---|---|---|---|
| 0.71 mm | HB | - | UL94 |
| 1.50 mm | HB | - | UL94 |
| 3.00 mm | HB | - | UL94 |

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