



## PoliXL™ PA66GF50BK

Nylon 66, 50% Fiberglass Reinforced, Black, Heat Stabilized

| Physical                   | DAM       | Conditioned | Test Method |
|----------------------------|-----------|-------------|-------------|
| Specific Gravity, g/cc     | 1.56      | -           | D792        |
| Mold Shrinkage, %          |           |             | D955        |
| Parallel: 23 °C            | 0.2 - 0.4 | -           |             |
| Perpendicular :23°C        | 0.6 - 0.8 | -           |             |
| Water Absorption, %        |           |             | D570        |
| Equilibrium, 23 °C, 50% RH | 1.8       | -           |             |
| Ash (Glass-fiber), %       | 50        | -           | D2584       |

| Mechanical                          | DAM                | Conditioned        | Test Method |
|-------------------------------------|--------------------|--------------------|-------------|
| Tensile Modulus, psi (MPa)          | 2,450,000 (17,000) | 1,380,000 (9,500)  | ISO 527     |
| Tensile Strength (Break), psi (MPa) | 34,100 (235)       | 24,660 (170)       | D638        |
| Tensile Strain (Break), %           | 2.5                | 3                  | D638        |
| Flexural Modulus, psi (MPa)         | 2,100,000 (14,480) | 1,590,000 (11,000) | D790        |
| Flex Strength, psi (MPa)            | 56,600 (390)       | 39,000 (270)       | D790        |

| Impact  | DAM       | Conditioned | Test Method |
|---|-----------|-------------|-------------|
| Charpy Notched Impact Strength ft-lb/in (kJ/m <sup>2</sup> )    |           |             | ISO 179     |
| 23 °C   | 4 (21)    | 4.7 (25)    |             |
| -30 °C  | 3.5 (18)  | 5.6 (30)    |             |
| Charpy Unnotched Impact Strength, ft-lb/in (kJ/m <sup>2</sup> ) |           |             | ISO 179     |
| 23°C  | 11.2 (60) | 12.2 (65)   |             |
| -30 °C  | 11 (58)   | 8.62 (46)   |             |
| Notched Izod Impact Strength, ft-lb/in (kJ/m <sup>2</sup> )     |           |             | D256        |
| 23°C  | 2.4 (13)  | 3 (16)      |             |
| -30 °C  | 1.9 (10)  | 2 (11)      |             |

| Thermal                              | DAM       | Conditioned | Test Method |
|--------------------------------------|-----------|-------------|-------------|
| Heat Deflection Temperature, °F (°C) |           |             | ISO 75      |
| 0.45 MPa Unannealed                  | 502 (261) | -           |             |
| 1.8 MPa Unannealed                   | 485 (252) | -           |             |
| Melting Temperature, °F (°C)         | 505 (263) | -           | 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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