



PoliXL™ PA66BK

Nylon 66, Unmodified, Black, Heat Stabilized

| Physical | DAM | Conditioned | Test Method |
|----------------------------|-------------|-------------|-------------|
| Specific Gravity, g/cc | 1.13 | - | D792 |
| Mold Shrinkage, % | | | D955 |
| Parallel: 23 °C | 1.3 - 1.5 % | - | |
| Perpendicular :23°C | 1.3 - 1.5 % | - | |
| Water Absorption, % | | | D570 |
| Equilibrium, 23 °C, 50% RH | 2 | - | |
| Ash, % | - | - | D2584 |

| Mechanical | DAM | Conditioned | Test Method |
|-------------------------------------|-----------------|-----------------|-------------|
| Tensile Modulus, psi (MPa) | 390,000 (2,700) | 200,000 (1,400) | ISO 527 |
| Tensile Strength (Break), psi (MPa) | 11,000 (75) | 7,700 (53) | D638 |
| Tensile Strain (Break), % | 20 | 50 | D638 |
| Flexural Modulus, psi (MPa) | 410,000 (2,830) | 180,000 (1,200) | D790 |
| Flex Strength, psi (MPa) | 16,500 (113) | - | D790 |

| Impact | DAM | Conditioned | Test Method |
|--|----------|-------------|-------------|
| Charpy Notched Impact Strength ft-lb/ in (kJ/m ²) | | | ISO 179 |
| 23 °C | 0.93 (5) | 2.25 (12) | |
| -30 °C | 0.55 (3) | 0.55 (3) | |
| Charpy Unnotched Impact Strength, ft-lb/in (kJ/m ²) | | | ISO 179 |
| 23 °C | - | - | |
| -30 °C | - | - | |
| Notched Izod Impact Strength, ft-lb/ in (kJ/m ²) | | | D256 |
| 23 °C | 1 (5.5) | - | |
| -30 °C | 0.6 (3) | - | |

| Thermal | DAM | Conditioned | Test Method |
|--------------------------------------|-----------|-------------|-------------|
| Heat Deflection Temperature, °F (°C) | | | ISO 75 |
| 0.45 MPa Unannealed | 392 (200) | - | |
| 1.8 MPa Unannealed | 158 (70) | - | |
| Melting Temperature, °F (°C) | 504 (262) | - | DSC |

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



Legal Disclaimer

The information presented here is accurate and reliable. Because conditions of use are beyond our control, we make no warranties, expressed or implied and specifically exclude any and all warranties of merchantability and fitness for a particular purpose. Our products are sold with the express understanding that our customers will conduct their own tests to determine the suitability of the material for their particular use. Nothing herein shall be construed as permission or recommendation to practice a patented invention without a license. The sole liability for Niche Polymer for any claims arising out of the manufacturer, use or sale of its products shall be for our customers purchase price or material replacement.

