# DuPont Performance Polymers Zytel® 73G50HSLA BK416 Nylon 6 (Unverified Data**)

**Category :** Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 50% Glass Fiber Filled

**Material Notes:**

Zytel® 73G50HSLA BK416 is a 50% glass fiber reinforced, heat stabilized, lubricated, polyamide 6 resin for injection molding. It has an excellent surface appearance and gloss.Information provided by DuPont Performance Polymers

Order this product through the following link:
http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-73G50HSLA-BK416-Nylon-6-nbspUnverified-Data.php

| Physical Properties | Metric | English | Comments |
|---|---|---|---|
| Density | 1.58 g/cc | 0.0571 lb/in³ | DAM; ISO 1183 |
| Filler Content | 50 % | 50 % | DAM |
| Water Absorption | 1.4 %<br>@Temperature 23.0 °C | 1.4 %<br>@Temperature 73.4 °F | Equilibrium 50%RH; DAM; ASTM D570 |
| | 1.4 %<br>@Temperature 23.0 °C | 1.4 %<br>@Temperature 73.4 °F | Equilibrium 50%RH; DAM; ISO 62 |
| | 4.5 %<br>@Temperature 23.0 °C | 4.5 %<br>@Temperature 73.4 °F | Saturation, immersed; DAM; ASTM D570 |
| | 4.5 %<br>@Temperature 23.0 °C | 4.5 %<br>@Temperature 73.4 °F | Saturation, immersed; DAM; ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0033 cm/cm<br>@Thickness 2.00 mm | 0.0033 in/in<br>@Thickness 0.0787 in | DAM; ISO 294-4 |
| Linear Mold Shrinkage, Transverse | 0.0058 cm/cm<br>@Thickness 2.00 mm | 0.0058 in/in<br>@Thickness 0.0787 in | DAM; ISO 294-4 |

| Mechanical Properties | Metric | English | Comments |
|---|---|---|---|
| Tensile Strength at Break | 170 MPa<br>@Temperature 23.0 °C | 24700 psi<br>@Temperature 73.4 °F | 50%RH; ISO 527 |
| | 233 MPa<br>@Temperature 23.0 °C | 33800 psi<br>@Temperature 73.4 °F | DAM; ISO 527 |
| Elongation at Break | 2.2 %<br>@Temperature 23.0 °C | 2.2 %<br>@Temperature 73.4 °F | DAM; ISO 527 |
| | 3.3 % | 3.3 % | |

| Mechanical Properties | Metric | English | Comments |
|---|---|---|---|
| | @Temperature 23.0 °C | @Temperature 73.4 °F | 50%RH; ISO 527 |
| Tensile Modulus | 12.0 GPa<br>@Temperature 23.0 °C | 1740 ksi<br>@Temperature 73.4 °F | 50%RH; ISO 527 |
| | 15.5 GPa<br>@Temperature 23.0 °C | 2250 ksi<br>@Temperature 73.4 °F | DAM; ISO 527 |
| Flexural Modulus | 11.1 GPa<br>@Temperature 23.0 °C | 1610 ksi<br>@Temperature 73.4 °F | 50%RH; ISO 178 |
| | 14.3 GPa<br>@Temperature 23.0 °C | 2070 ksi<br>@Temperature 73.4 °F | DAM; ISO 178 |
| Charpy Impact Unnotched | 9.00 J/cm²<br>@Temperature 23.0 °C | 42.8 ft-lb/in²<br>@Temperature 73.4 °F | DAM; ISO 179/1eU |
| | 9.80 J/cm²<br>@Temperature 23.0 °C | 46.6 ft-lb/in²<br>@Temperature 73.4 °F | 50%RH; ISO 179/1eU |
| | 10.0 J/cm²<br>@Temperature -30.0 °C | 47.6 ft-lb/in²<br>@Temperature -22.0 °F | DAM; ISO 179/1eU |
| | 11.0 J/cm²<br>@Temperature -30.0 °C | 52.3 ft-lb/in²<br>@Temperature -22.0 °F | 50%RH; ISO 179/1eU |
| Charpy Impact, Notched | 1.90 J/cm²<br>@Temperature 23.0 °C | 9.04 ft-lb/in²<br>@Temperature 73.4 °F | DAM; ISO 179/1eA |
| | 2.00 J/cm²<br>@Temperature 23.0 °C | 9.52 ft-lb/in²<br>@Temperature 73.4 °F | 50%RH; ISO 179/1eA |
| | 2.10 J/cm²<br>@Temperature -30.0 °C | 9.99 ft-lb/in²<br>@Temperature -22.0 °F | DAM; ISO 179/1eA |
| | 2.20 J/cm²<br>@Temperature -30.0 °C | 10.5 ft-lb/in²<br>@Temperature -22.0 °F | 50%RH; ISO 179/1eA |
| Tensile Creep Modulus, 1 hour | 9400 MPa<br>@Temperature 23.0 °C | 1.36e+6 psi<br>@Temperature 73.4 °F | 50%RH; ISO 899 |
| Tensile Creep Modulus, 1000 hours | 7300 MPa<br>@Temperature 23.0 °C | 1.06e+6 psi<br>@Temperature 73.4 °F | 50%RH; ISO 899 |

| Thermal Properties | Metric | English | Comments |
|---|---|---|---|

| Thermal Properties | Metric | English | Comments |
|---|---|---|---|
| CTE, linear, Parallel to Flow | 500 µm/m-°C<br>@Temperature 23.0 - 55.0 °C | 278 µin/in-°F<br>@Temperature 73.4 - 131 °F | DAM; ISO 11359-1/-2 |
| CTE, linear, Transverse to Flow | 100 µm/m-°C<br>@Temperature 23.0 - 55.0 °C | 55.6 µin/in-°F<br>@Temperature 73.4 - 131 °F | DAM; ISO 11359-1/-2 |
| Melting Point | 219 °C | 426 °F | 10°C/min; DAM; ISO 11357-1/-3 |
| Deflection Temperature at 0.46 MPa (66 psi) | 219 °C | 426 °F | DAM; ISO 75-1/-2 |
| Deflection Temperature at 1.8 MPa (264 psi) | 212 °C | 414 °F | DAM; ISO 75-1/-2 |
| Flammability, UL94 | HB<br>@Thickness 3.00 mm | HB<br>@Thickness 0.118 in | DAM; IEC 60695-11-10 |

| Electrical Properties | Metric | English | Comments |
|---|---|---|---|
| Surface Resistance | 5.00e+12 ohm<br>@Temperature 23.0 °C | 5.00e+12 ohm<br>@Temperature 73.4 °F | 50%RH; IEC 60093 |
| Comparative Tracking Index | 380 V<br>@Temperature 23.0 °C | 380 V<br>@Temperature 73.4 °F | DAM; IEC 60112 |

| Processing Properties | Metric | English | Comments |
|---|---|---|---|
| Melt Temperature | 270 °C | 518 °F | DAM; Optimum |
| | 260 - 280 °C | 500 - 536 °F | DAM |
| Mold Temperature | 70.0 - 120 °C | 158 - 248 °F | DAM |
| | 100 °C | 212 °F | DAM; optimum |
| Drying Temperature | 80.0 °C | 176 °F | DAM |
| Dry Time | 2.00 - 4.00 hour | 2.00 - 4.00 hour | DAM |
| Moisture Content | <= 0.20 % | <= 0.20 % | DAM |

| Descriptive Properties | Value | Comments |
|---|---|---|
| Appearance | Black Color | DAM |
| Features | Heat Stabilized | DAM |
| | Lubricated | DAM |

| Filler | Glass fiber | DAM |
|---|---|---|
| Descriptive Properties | Value | Comments |
| Forms | Pellets | DAM |
| Generic | Nylon 6 | DAM |
| Material Status | Preliminary Data | DAM |
| Part Marking Code | >PA6-GF50< | ISO 11469; DAM |
| Processing Method | Injection Molding | DAM |
| Product Category | Glass Reinforced Resins | DAM |
| Region Available - Global | Yes | DAM |
| Resin Identification | PA6-GF50 | ISO 1043; DAM |
| RoHS Compliance | Contact Manufacturer | DAM |

## Contact Songhan Plastic Technology Co.,Ltd.

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