

DuPont Performance Polymers Zytel® 70G50HSLA BK039B Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 50% Glass Fiber Filled

Material Notes:

50% Glass Reinforced Heat Stabilized Polyamide 66 Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-70G50HSLA-BK039B-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.40 g/cc	0.0506 lb/in ³	
	1.57 g/cc	0.0567 lb/in ³	DAM; ISO 1183
Water Absorption	4.2 %	4.2 %	
	@Thickness 2.00 mm	@Thickness 0.0787 in	DAM; Sim. to ISO 62
Moisture Absorption	1.20 %	1.20 %	
	@Thickness 2.00 mm	@Thickness 0.0787 in	DAM; Sim. to ISO 62
Viscosity	31200 cP	31200 cP	
	@Shear Rate 5000 1/s, Temperature 305 °C	@Shear Rate 5000 1/s, Temperature 581 °F	ISO 11403-1 -2
	38800 cP	38800 cP	
	@Shear Rate 5000 1/s, Temperature 295 °C	@Shear Rate 5000 1/s, Temperature 563 °F	ISO 11403-1 -2
	49290 cP	49290 cP	
	@Shear Rate 5000 1/s, Temperature 285 °C	@Shear Rate 5000 1/s, Temperature 545 °F	ISO 11403-1 -2
	103100 cP	103100 cP	
	@Shear Rate 500 1/s, Temperature 305 °C	@Shear Rate 500 1/s, Temperature 581 °F	ISO 11403-1 -2
	130500 cP	130500 cP	
	@Shear Rate 500 1/s, Temperature 295 °C	@Shear Rate 500 1/s, Temperature 563 °F	ISO 11403-1 -2
	167800 cP	167800 cP	
	@Shear Rate 500 1/s, Temperature 285 °C	@Shear Rate 500 1/s, Temperature 545 °F	ISO 11403-1 -2
Viscosity Test	100 cm ³ /g	100 cm ³ /g	DAM; ISO 307 1157 1628
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	DAM; ISO 294-4 2577

Linear Mold Shrinkage, Transverse Physical Properties	0.0080 cm/cm Metric	0.0080 in/in English	DAM: ISO 294-4 2577 Comments
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Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	210 MPa	30500 psi	50%RH; ISO 527-1/-2
	260 MPa	37700 psi	DAM; ISO 527-1/-2
Tensile Stress	16.06 MPa	2329 psi	50%RH; ISO 11403-1 -2
	@Strain 0.250 %, Temperature 150 °C	@Strain 0.250 %, Temperature 302 °F	
	16.27 MPa	2360 psi	DAM; ISO 11403-1 -2
	@Strain 0.230 %, Temperature 180 °C	@Strain 0.230 %, Temperature 356 °F	
	24.39 MPa	3537 psi	DAM; ISO 11403-1 -2
	@Strain 0.330 %, Temperature 150 °C	@Strain 0.330 %, Temperature 302 °F	
	37.38 MPa	5422 psi	50%RH; ISO 11403-1 -2
	@Strain 0.320 %, Temperature 23.0 °C	@Strain 0.320 %, Temperature 73.4 °F	
	39.23 MPa	5690 psi	50%RH; ISO 11403-1 -2
	@Strain 0.400 %, Temperature 40.0 °C	@Strain 0.400 %, Temperature 104 °F	
	40.3 MPa	5850 psi	50%RH; ISO 11403-1 -2
	@Strain 0.490 %, Temperature 90.0 °C	@Strain 0.490 %, Temperature 194 °F	
	40.82 MPa	5920 psi	DAM; ISO 11403-1 -2
	@Strain 0.450 %, Temperature 90.0 °C	@Strain 0.450 %, Temperature 194 °F	
	46.14 MPa	6692 psi	50%RH; ISO 11403-1 -2
	@Strain 0.980 %, Temperature 150 °C	@Strain 0.980 %, Temperature 302 °F	
	50.97 MPa	7393 psi	DAM; ISO 11403-1 -2
	@Strain 1.05 %, Temperature 180 °C	@Strain 1.05 %, Temperature 356 °F	
	56.85 MPa	8245 psi	DAM; ISO 11403-1 -2
	@Strain 0.380 %, Temperature 40.0 °C	@Strain 0.380 %, Temperature 104 °F	
	58.16 MPa	8435 psi	DAM; ISO 11403-1 -2
	@Strain 1.03 %,	@Strain 1.03 %,	

Mechanical Properties	Temperature 150 °C Metric	Temperature 302 °F English	Comments
	62.02 MPa	8995 psi	
	@Strain 1.75 %, Temperature 150 °C	@Strain 1.75 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	68.69 MPa	9963 psi	
	@Strain 1.93 %, Temperature 180 °C	@Strain 1.93 %, Temperature 356 °F	DAM; ISO 11403-1 -2
	69.06 MPa	10020 psi	
	@Strain 1.06 %, Temperature 90.0 °C	@Strain 1.06 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	72.29 MPa	10480 psi	
	@Strain 2.59 %, Temperature 150 °C	@Strain 2.59 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	73.76 MPa	10700 psi	
	@Strain 0.420 %, Temperature -20.0 °C	@Strain 0.420 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	76.36 MPa	11080 psi	
	@Strain 0.860 %, Temperature 40.0 °C	@Strain 0.860 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	77.8 MPa	11300 psi	
	@Strain 1.78 %, Temperature 150 °C	@Strain 1.78 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	80.2 MPa	11600 psi	
	@Strain 2.95 %, Temperature 180 °C	@Strain 2.95 %, Temperature 356 °F	DAM; ISO 11403-1 -2
	81.87 MPa	11870 psi	
	@Strain 1.11 %, Temperature 90.0 °C	@Strain 1.11 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	84.37 MPa	12240 psi	
	@Strain 0.800 %, Temperature 23.0 °C	@Strain 0.800 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	86.56 MPa	12550 psi	
	@Strain 1.63 %, Temperature 90.0 °C	@Strain 1.63 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	87.17 MPa	12640 psi	
	@Strain 5.71 %, Temperature 150 °C	@Strain 5.71 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	87.47 MPa	12690 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 0.560 %, Temperature 23.0 °C	@Strain 0.560 %, Temperature 73.4 °F	5111 ISO 11403-1 -2
	91.1 MPa	13200 psi	
	@Strain 2.66 %, Temperature 150 °C	@Strain 2.66 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	95.38 MPa	13830 psi	
	@Strain 0.630 %, Temperature 0.000 °C	@Strain 0.630 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	95.71 MPa	13880 psi	
	@Strain 0.670 %, Temperature 40.0 °C	@Strain 0.670 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	97.7 MPa	14200 psi	
	@Strain 6.73 %, Temperature 180 °C	@Strain 6.73 %, Temperature 356 °F	DAM; ISO 11403-1 -2
	99.43 MPa	14420 psi	
	@Strain 2.33 %, Temperature 90.0 °C	@Strain 2.33 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	100.54 MPa	14582 psi	
	@Strain 1.30 %, Temperature 40.0 °C	@Strain 1.30 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	103.18 MPa	14965 psi	
	@Strain 1.62 %, Temperature 90.0 °C	@Strain 1.62 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	105.85 MPa	15352 psi	
	@Strain 0.640 %, Temperature -20.0 °C	@Strain 0.640 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	110.54 MPa	16033 psi	
	@Strain 6.10 %, Temperature 150 °C	@Strain 6.10 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	112.46 MPa	16311 psi	
	@Strain 1.21 %, Temperature 23.0 °C	@Strain 1.21 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	115.46 MPa	16746 psi	
	@Strain 0.710 %, Temperature 0.000 °C	@Strain 0.710 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	119.26 MPa	17297 psi	
	@Strain 1.78 %, Temperature 40.0 °C	@Strain 1.78 %, Temperature 104 °F	50%RH; ISO 11403-1 -2

Mechanical Properties	Metric	English	Comments
	120.07 MPa	17319 psi	
	@Strain 2.19 %, Temperature 90.0 °C	@Strain 2.19 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	130.16 MPa	18878 psi	
	@Strain 0.930 %, Temperature 0.000 °C	@Strain 0.930 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	134.23 MPa	19468 psi	
	@Strain 1.65 %, Temperature 23.0 °C	@Strain 1.65 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	134.58 MPa	19519 psi	
	@Strain 0.890 %, Temperature 23.0 °C	@Strain 0.890 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	136.34 MPa	19774 psi	
	@Strain 1.05 %, Temperature 40.0 °C	@Strain 1.05 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	158.96 MPa	23055 psi	
	@Strain 1.25 %, Temperature 0.000 °C	@Strain 1.25 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	164.86 MPa	23911 psi	
	@Strain 1.40 %, Temperature 40.0 °C	@Strain 1.40 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	165.48 MPa	24001 psi	
	@Strain 1.08 %, Temperature 0.000 °C	@Strain 1.08 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	167.1 MPa	24240 psi	
	@Strain 1.17 %, Temperature 23.0 °C	@Strain 1.17 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	184.66 MPa	26783 psi	
	@Strain 1.23 %, Temperature -20.0 °C	@Strain 1.23 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	185.69 MPa	26932 psi	
	@Strain 1.15 %, Temperature -20.0 °C	@Strain 1.15 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	186.31 MPa	27022 psi	
	@Strain 1.64 %, Temperature 0.000 °C	@Strain 1.64 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	198.07 MPa	28728 psi	

Mechanical Properties	@Strain 1.36 %, Metric Temperature 0.000 °C	@Strain 1.36 %, English Temperature 32.0 °F	DAM: ISO 11403-1 -2 Comments
	198.66 MPa	28813 psi	
	@Strain 1.53 %, Temperature 23.0 °C	@Strain 1.53 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2

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