

DuPont Performance Polymers Zytel® 80G43HS1L BK104 Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 40% Glass Fiber Filled

Material Notes:

Zytel® 80G43HS1L BK104 is a 43% glass fiber reinforced, heat stabilized, black polyamide 66 resin with superior impact resistance. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-80G43HS1L-BK104-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.43 g/cc	1.43 g/cc	DAM; ASTM D792
Density	1.43 g/cc	0.0517 lb/in ³	DAM; ISO 1183
Filler Content	43 %	43 %	DAM
Water Absorption	1.5 %	1.5 %	Equilibrium 50%RH; DAM; ISO 62, Similar to
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	
	4.9 %	4.9 %	Saturation, immersed; DAM; ISO 62, Similar to
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	169 MPa	24500 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength	117 MPa	17000 psi	50%RH; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	152 MPa	22000 psi	DAM; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	5.90 MPa	856 psi	DAM; ISO 11403-1/-2
	@Strain 0.100 %, Temperature 100 °C	@Strain 0.100 %, Temperature 212 °F	

Mechanical Properties	8.66 MPa Metric	1260 psi English	Comments DAM; ISO 11403-1/-2
	@Strain 0.200 %, Temperature 150 °C	@Strain 0.200 %, Temperature 302 °F	
	11.6 MPa	1680 psi	DAM; ISO 11403-1/-2
	@Strain 0.200 %, Temperature 100 °C	@Strain 0.200 %, Temperature 212 °F	
	12.0 MPa	1740 psi	DAM; ISO 11403-1/-2
	@Strain 0.100 %, Temperature 23.0 °C	@Strain 0.100 %, Temperature 73.4 °F	
	12.2 MPa	1770 psi	DAM; ISO 11403-1/-2
	@Strain 0.100 %, Temperature -40.0 °C	@Strain 0.100 %, Temperature -40.0 °F	
	12.44 MPa	1804 psi	DAM; ISO 11403-1/-2
	@Strain 0.300 %, Temperature 150 °C	@Strain 0.300 %, Temperature 302 °F	
	15.74 MPa	2283 psi	DAM; ISO 11403-1/-2
	@Strain 0.400 %, Temperature 150 °C	@Strain 0.400 %, Temperature 302 °F	
	16.79 MPa	2435 psi	DAM; ISO 11403-1/-2
	@Strain 0.300 %, Temperature 100 °C	@Strain 0.300 %, Temperature 212 °F	
	18.66 MPa	2706 psi	DAM; ISO 11403-1/-2
	@Strain 0.500 %, Temperature 150 °C	@Strain 0.500 %, Temperature 302 °F	
	21.19 MPa	3073 psi	DAM; ISO 11403-1/-2
	@Strain 0.400 %, Temperature 100 °C	@Strain 0.400 %, Temperature 212 °F	
	21.27 MPa	3085 psi	DAM; ISO 11403-1/-2
	@Strain 0.600 %, Temperature 150 °C	@Strain 0.600 %, Temperature 302 °F	
	23.76 MPa	3446 psi	DAM; ISO 11403-1/-2
	@Strain 0.700 %, Temperature 150 °C	@Strain 0.700 %, Temperature 302 °F	
	25.41 MPa	3685 psi	DAM; ISO 11403-1/-2
	@Strain 0.500 %, Temperature 100 °C	@Strain 0.500 %, Temperature 212 °F	
	25.98 MPa	3768 psi	DAM; ISO 11403-1/-2
	@Strain 0.800 %,	@Strain 0.800 %,	

Mechanical Properties	Temperature 150 °C Metric	Temperature 302 °F English	Comments
	29.36 MPa @Strain 0.600 %, Temperature 100 °C	4258 psi @Strain 0.600 %, Temperature 212 °F	DAM; ISO 11403-1/-2
	30.01 MPa @Strain 1.00 %, Temperature 150 °C	4353 psi @Strain 1.00 %, Temperature 302 °F	DAM; ISO 11403-1/-2
	32.97 MPa @Strain 0.700 %, Temperature 100 °C	4782 psi @Strain 0.700 %, Temperature 212 °F	DAM; ISO 11403-1/-2
	34.77 MPa @Strain 1.30 %, Temperature 150 °C	5043 psi @Strain 1.30 %, Temperature 302 °F	DAM; ISO 11403-1/-2
	35.9 MPa @Strain 0.300 %, Temperature 23.0 °C	5210 psi @Strain 0.300 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	36.27 MPa @Strain 0.800 %, Temperature 100 °C	5261 psi @Strain 0.800 %, Temperature 212 °F	DAM; ISO 11403-1/-2
	36.6 MPa @Strain 0.300 %, Temperature -40.0 °C	5310 psi @Strain 0.300 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	38.83 MPa @Strain 1.60 %, Temperature 150 °C	5632 psi @Strain 1.60 %, Temperature 302 °F	DAM; ISO 11403-1/-2
	42.21 MPa @Strain 1.00 %, Temperature 100 °C	6122 psi @Strain 1.00 %, Temperature 212 °F	DAM; ISO 11403-1/-2
	44.96 MPa @Strain 2.20 %, Temperature 150 °C	6521 psi @Strain 2.20 %, Temperature 302 °F	DAM; ISO 11403-1/-2
	47.37 MPa @Strain 2.50 %, Temperature 150 °C	6870 psi @Strain 2.50 %, Temperature 302 °F	DAM; ISO 11403-1/-2
	47.56 MPa @Strain 1.20 %, Temperature 100 °C	6898 psi @Strain 1.20 %, Temperature 212 °F	DAM; ISO 11403-1/-2

Mechanical Properties	52.32 MPa Metric	7588 psi English	Comments DAM; ISO 11403-1/-2
	@Strain 1.40 %, Temperature 100 °C	@Strain 1.40 %, Temperature 212 °F	
	54.48 MPa	7902 psi	DAM; ISO 11403-1/-2
	@Strain 1.50 %, Temperature 100 °C	@Strain 1.50 %, Temperature 212 °F	
	55.09 MPa	7990 psi	DAM; ISO 11403-1/-2
	@Strain 3.90 %, Temperature 150 °C	@Strain 3.90 %, Temperature 302 °F	
	56.22 MPa	8154 psi	DAM; ISO 11403-1/-2
	@Strain 4.20 %, Temperature 150 °C	@Strain 4.20 %, Temperature 302 °F	
	56.9 MPa	8250 psi	DAM; ISO 11403-1/-2
	@Strain 4.40 %, Temperature 150 °C	@Strain 4.40 %, Temperature 302 °F	
	57.2 MPa	8300 psi	DAM; ISO 11403-1/-2
	@Strain 0.500 %, Temperature 23.0 °C	@Strain 0.500 %, Temperature 73.4 °F	
	58.63 MPa	8504 psi	DAM; ISO 11403-1/-2
	@Strain 5.00 %, Temperature 150 °C	@Strain 5.00 %, Temperature 302 °F	
	60.32 MPa	8749 psi	DAM; ISO 11403-1/-2
	@Strain 1.80 %, Temperature 100 °C	@Strain 1.80 %, Temperature 212 °F	
	60.75 MPa	8811 psi	DAM; ISO 11403-1/-2
	@Strain 6.00 %, Temperature 150 °C	@Strain 6.00 %, Temperature 302 °F	
	61.41 MPa	8907 psi	DAM; ISO 11403-1/-2
	@Strain 6.50 %, Temperature 150 °C	@Strain 6.50 %, Temperature 302 °F	
	61.66 MPa	8943 psi	DAM; ISO 11403-1/-2
	@Strain 7.00 %, Temperature 150 °C	@Strain 7.00 %, Temperature 302 °F	
	63.67 MPa	9235 psi	DAM; ISO 11403-1/-2
	@Strain 2.00 %, Temperature 100 °C	@Strain 2.00 %, Temperature 212 °F	
	66.96 MPa	9712 psi	DAM; ISO 11403-1/-2
	@Strain 0.600 %,	@Strain 0.600 %,	

Mechanical Properties	Temperature 23.0 °C Metric	Temperature 73.4 °F English	Comments
	68.13 MPa	9881 psi	
	@Strain 2.30 %, Temperature 100 °C	@Strain 2.30 %, Temperature 212 °F	DAM; ISO 11403-1/-2
	68.46 MPa	9929 psi	
	@Strain 0.600 %, Temperature -40.0 °C	@Strain 0.600 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	75.12 MPa	10900 psi	
	@Strain 2.90 %, Temperature 100 °C	@Strain 2.90 %, Temperature 212 °F	DAM; ISO 11403-1/-2
	76.36 MPa	11080 psi	
	@Strain 0.700 %, Temperature 23.0 °C	@Strain 0.700 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	78.69 MPa	11410 psi	
	@Strain 0.700 %, Temperature -40.0 °C	@Strain 0.700 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	81.73 MPa	11850 psi	
	@Strain 3.70 %, Temperature 100 °C	@Strain 3.70 %, Temperature 212 °F	DAM; ISO 11403-1/-2
	85.24 MPa	12360 psi	
	@Strain 0.800 %, Temperature 23.0 °C	@Strain 0.800 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	88.05 MPa	12770 psi	
	@Strain 5.00 %, Temperature 100 °C	@Strain 5.00 %, Temperature 212 °F	DAM; ISO 11403-1/-2
	90.31 MPa	13100 psi	
	@Strain 6.00 %, Temperature 100 °C	@Strain 6.00 %, Temperature 212 °F	DAM; ISO 11403-1/-2
	93.42 MPa	13550 psi	
	@Strain 0.900 %, Temperature 23.0 °C	@Strain 0.900 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	101.03 MPa	14653 psi	
	@Strain 1.00 %, Temperature 23.0 °C	@Strain 1.00 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	107.51 MPa	15593 psi	
	@Strain 1.00 %, Temperature -40.0 °C	@Strain 1.00 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	108.25 MPa	15700 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 1.10 %, Temperature 23.0 °C	@Strain 1.10 %, Temperature 73.4 °F	1403-1/-2
	114.9 MPa	16660 psi	DAM; ISO 11403-1/-2
	@Strain 1.20 %, Temperature 23.0 °C	@Strain 1.20 %, Temperature 73.4 °F	
	116.67 MPa	16922 psi	DAM; ISO 11403-1/-2
	@Strain 1.10 %, Temperature -40.0 °C	@Strain 1.10 %, Temperature -40.0 °F	

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