

DuPont Performance Polymers Zytel® 70G20HSL NC010 Nylon 66

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 20% Glass Fiber Filled

Material Notes:

Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-70G20HSL-NC010-Nylon-66.php

Physical Properties	Metric	English	Comments
Density	1.29 g/cc	0.0466 lb/in ³	DAM; ISO 1183
Water Absorption	2.1 %	2.1 %	Equilibrium 50%RH; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	6.8 %	6.8 %	Saturation, immersed; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.012 cm/cm	0.012 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	50%RH; ISO 2039/2
	102	102	DAM; ISO 2039/2
Hardness, Rockwell R	115	115	50%RH; ISO 2039/2
	122	122	DAM; ISO 2039/2
Tensile Strength at Break	103 MPa	14900 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	159 MPa	23100 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	17.5 MPa	2540 psi	50%RH; ISO 527
	@Strain 0.530 %, Temperature 120 °C	@Strain 0.530 %, Temperature 248 °F	
	18.5 MPa	2680 psi	50%RH; ISO 527
	@Strain 0.520 %, Temperature 90.0 °C	@Strain 0.520 %, Temperature 194 °F	

Mechanical Properties	20.5 MPa Metric	2970 psi English	Comments
	@Strain 0.520 %, Temperature 60.0 °C	@Strain 0.520 %, Temperature 140 °F	50%RH; ISO 527
	22.2 MPa	3220 psi	
	@Strain 0.630 %, Temperature 120 °C	@Strain 0.630 %, Temperature 248 °F	DAM; ISO 527
	23.0 MPa	3340 psi	
	@Strain 0.480 %, Temperature 40.0 °C	@Strain 0.480 %, Temperature 104 °F	50%RH; ISO 527
	24.5 MPa	3550 psi	
	@Strain 0.610 %, Temperature 90.0 °C	@Strain 0.610 %, Temperature 194 °F	DAM; ISO 527
	25.9 MPa	3760 psi	
	@Strain 0.440 %, Temperature 23.0 °C	@Strain 0.440 %, Temperature 73.4 °F	50%RH; ISO 527
	26.2 MPa	3800 psi	
	@Strain 0.460 %, Temperature 60.0 °C	@Strain 0.460 %, Temperature 140 °F	DAM; ISO 527
	27.7 MPa	4020 psi	
	@Strain 0.270 %, Temperature -20.0 °C	@Strain 0.270 %, Temperature -4.00 °F	50%RH; ISO 527
	28.8 MPa	4180 psi	
	@Strain 0.330 %, Temperature 0.000 °C	@Strain 0.330 %, Temperature 32.0 °F	50%RH; ISO 527
	30.6 MPa	4440 psi	
	@Strain 1.06 %, Temperature 120 °C	@Strain 1.06 %, Temperature 248 °F	50%RH; ISO 527
	33.2 MPa	4820 psi	
	@Strain 0.360 %, Temperature 40.0 °C	@Strain 0.360 %, Temperature 104 °F	DAM; ISO 527
	33.4 MPa	4840 psi	
	@Strain 1.04 %, Temperature 90.0 °C	@Strain 1.04 %, Temperature 194 °F	50%RH; ISO 527
	35.9 MPa	5210 psi	
	@Strain 0.250 %, Temperature 23.0 °C	@Strain 0.250 %, Temperature 73.4 °F	DAM; ISO 527
	37.4 MPa	5420 psi	
	@Strain 1.04 %,	@Strain 1.04 %,	50%RH; ISO 527

Mechanical Properties	Temperature 60.0 °C Metric	Temperature 140 °F English	Comments
	38.3 MPa @Strain 1.26 %, Temperature 120 °C	5550 psi @Strain 1.26 %, Temperature 248 °F	DAM; ISO 527
	40.4 MPa @Strain 1.59 %, Temperature 120 °C	5860 psi @Strain 1.59 %, Temperature 248 °F	50%RH; ISO 527
	41.2 MPa @Strain 0.960 %, Temperature 40.0 °C	5980 psi @Strain 0.960 %, Temperature 104 °F	50%RH; ISO 527
	42.0 MPa @Strain 1.22 %, Temperature 90.0 °C	6090 psi @Strain 1.22 %, Temperature 194 °F	DAM; ISO 527
	45.1 MPa @Strain 1.56 %, Temperature 90.0 °C	6540 psi @Strain 1.56 %, Temperature 194 °F	50%RH; ISO 527
	45.4 MPa @Strain 0.920 %, Temperature 60.0 °C	6580 psi @Strain 0.920 %, Temperature 140 °F	DAM; ISO 527
	46.8 MPa @Strain 0.880 %, Temperature 23.0 °C	6790 psi @Strain 0.880 %, Temperature 73.4 °F	50%RH; ISO 527
	47.6 MPa @Strain 2.12 %, Temperature 120 °C	6900 psi @Strain 2.12 %, Temperature 248 °F	50%RH; ISO 527
	50.2 MPa @Strain 1.89 %, Temperature 120 °C	7280 psi @Strain 1.89 %, Temperature 248 °F	DAM; ISO 527
	50.7 MPa @Strain 1.56 %, Temperature 60.0 °C	7350 psi @Strain 1.56 %, Temperature 140 °F	50%RH; ISO 527
	51.2 MPa @Strain 0.540 %, Temperature -20.0 °C	7430 psi @Strain 0.540 %, Temperature -4.00 °F	50%RH; ISO 527
	52.4 MPa @Strain 0.660 %, Temperature 0.000 °C	7600 psi @Strain 0.660 %, Temperature 32.0 °F	50%RH; ISO 527
	52.8 MPa	7660 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 2.65 %, Temperature 120 °C	@Strain 2.65 %, Temperature 248 °F	50%RH; ISO 527
	53.9 MPa	7820 psi	50%RH; ISO 527
	@Strain 2.08 %, Temperature 90.0 °C	@Strain 2.08 %, Temperature 194 °F	
	55.4 MPa	8040 psi	50%RH; ISO 527
	@Strain 1.44 %, Temperature 40.0 °C	@Strain 1.44 %, Temperature 104 °F	
	55.7 MPa	8080 psi	DAM; ISO 527
	@Strain 1.83 %, Temperature 90.0 °C	@Strain 1.83 %, Temperature 194 °F	
	56.5 MPa	8190 psi	50%RH; ISO 527
	@Strain 3.18 %, Temperature 120 °C	@Strain 3.18 %, Temperature 248 °F	
	57.7 MPa	8370 psi	DAM; ISO 527
	@Strain 0.720 %, Temperature 40.0 °C	@Strain 0.720 %, Temperature 104 °F	
	58.8 MPa	8530 psi	DAM; ISO 527
	@Strain 2.52 %, Temperature 120 °C	@Strain 2.52 %, Temperature 248 °F	
	59.0 MPa	8560 psi	50%RH; ISO 527
	@Strain 3.71 %, Temperature 120 °C	@Strain 3.71 %, Temperature 248 °F	
	60.0 MPa	8700 psi	DAM; ISO 527
	@Strain 0.500 %, Temperature 23.0 °C	@Strain 0.500 %, Temperature 73.4 °F	
	60.4 MPa	8760 psi	50%RH; ISO 527
	@Strain 2.60 %, Temperature 90.0 °C	@Strain 2.60 %, Temperature 194 °F	
	60.7 MPa	8800 psi	50%RH; ISO 527
	@Strain 4.24 %, Temperature 120 °C	@Strain 4.24 %, Temperature 248 °F	
	61.0 MPa	8850 psi	DAM; ISO 527
	@Strain 1.38 %, Temperature 60.0 °C	@Strain 1.38 %, Temperature 140 °F	
	61.1 MPa	8860 psi	50%RH; ISO 527
	@Strain 2.08 %, Temperature 60.0 °C	@Strain 2.08 %, Temperature 140 °F	

Mechanical Properties	Metric	English	Comments
	@Strain 4.77 %, Temperature 120 °C	@Strain 4.77 %, Temperature 248 °F	50%RH; ISO 527
	62.2 MPa	9020 psi	
	@Strain 5.30 %, Temperature 120 °C	@Strain 5.30 %, Temperature 248 °F	50%RH; Break; ISO 527
	63.2 MPa	9170 psi	
	@Strain 1.32 %, Temperature 23.0 °C	@Strain 1.32 %, Temperature 73.4 °F	50%RH; ISO 527
	64.5 MPa	9350 psi	
	@Strain 3.15 %, Temperature 120 °C	@Strain 3.15 %, Temperature 248 °F	DAM; ISO 527
	65.1 MPa	9440 psi	
	@Strain 3.12 %, Temperature 90.0 °C	@Strain 3.12 %, Temperature 194 °F	50%RH; ISO 527
	66.0 MPa	9570 psi	
	@Strain 2.44 %, Temperature 90.0 °C	@Strain 2.44 %, Temperature 194 °F	DAM; ISO 527
	66.4 MPa	9630 psi	
	@Strain 1.92 %, Temperature 40.0 °C	@Strain 1.92 %, Temperature 104 °F	50%RH; ISO 527
	68.1 MPa	9880 psi	
	@Strain 3.78 %, Temperature 120 °C	@Strain 3.78 %, Temperature 248 °F	DAM; ISO 527
	68.2 MPa	9890 psi	
	@Strain 3.64 %, Temperature 90.0 °C	@Strain 3.64 %, Temperature 194 °F	50%RH; ISO 527
	68.8 MPa	9980 psi	
	@Strain 2.60 %, Temperature 60.0 °C	@Strain 2.60 %, Temperature 140 °F	50%RH; ISO 527
	70.1 MPa	10200 psi	
	@Strain 4.41 %, Temperature 120 °C	@Strain 4.41 %, Temperature 248 °F	DAM; ISO 527
	70.3 MPa	10200 psi	
	@Strain 4.16 %, Temperature 90.0 °C	@Strain 4.16 %, Temperature 194 °F	50%RH; ISO 527
	71.3 MPa	10300 psi	
			DAM; ISO 527

Mechanical Properties	Metric @Strain 5.04 %, Temperature 120 °C	English @Strain 5.04 %, Temperature 248 °F	Comments
	71.4 MPa	10400 psi	50%RH; ISO 527
	@Strain 4.68 %, Temperature 90.0 °C	@Strain 4.68 %, Temperature 194 °F	
	71.4 MPa	10400 psi	50%RH; ISO 527
	@Strain 0.810 %, Temperature -20.0 °C	@Strain 0.810 %, Temperature -4.00 °F	

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