

DuPont Performance Polymers Zytel® PLS 93G35DH1 BK549 Nylon 6 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 40% Glass Fiber Filled

Material Notes:

35% Glass Reinforced Heat Stabilized Polyamide 6 Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-PLS-93G35DH1-BK549-Nylon-6-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	
	1.40 g/cc	0.0506 lb/in ³	DAM; ISO 1183
Water Absorption	2.0 %	2.0 %	DAM; Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity	63230 cP	63230 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 280 °C	@Shear Rate 5000 1/s, Temperature 536 °F	
	75340 cP	75340 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 270 °C	@Shear Rate 5000 1/s, Temperature 518 °F	
	90990 cP	90990 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	
	191300 cP	191300 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 280 °C	@Shear Rate 500 1/s, Temperature 536 °F	
238600 cP	238600 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 270 °C	@Shear Rate 500 1/s, Temperature 518 °F		
299100 cP	299100 cP	ISO 11403-1 -2	
@Shear Rate 500 1/s, Temperature 260 °C	@Shear Rate 500 1/s, Temperature 500 °F		
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	DAM; ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	120 MPa	17400 psi	50%RH; ISO 527-1/-2

Mechanical Properties	Metric 200 MPa	English 29000 psi	Comments DAM; ISO 527-1/-2
Tensile Stress	8.71 MPa	1260 psi	50%RH; ISO 11403-1 -2
	@Strain 0.230 %, Temperature 150 °C	@Strain 0.230 %, Temperature 302 °F	
	11.56 MPa	1677 psi	50%RH; ISO 11403-1 -2
	@Strain 0.230 %, Temperature 90.0 °C	@Strain 0.230 %, Temperature 194 °F	
	12.2 MPa	1770 psi	DAM; ISO 11403-1 -2
	@Strain 0.340 %, Temperature 180 °C	@Strain 0.340 %, Temperature 356 °F	
	14.68 MPa	2129 psi	50%RH; ISO 11403-1 -2
	@Strain 0.230 %, Temperature 40.0 °C	@Strain 0.230 %, Temperature 104 °F	
	16.28 MPa	2361 psi	50%RH; ISO 11403-1 -2
	@Strain 0.220 %, Temperature 23.0 °C	@Strain 0.220 %, Temperature 73.4 °F	
	17.71 MPa	2569 psi	DAM; ISO 11403-1 -2
	@Strain 0.420 %, Temperature 150 °C	@Strain 0.420 %, Temperature 302 °F	
	23.12 MPa	3353 psi	DAM; ISO 11403-1 -2
	@Strain 0.460 %, Temperature 90.0 °C	@Strain 0.460 %, Temperature 194 °F	
	26.72 MPa	3875 psi	50%RH; ISO 11403-1 -2
@Strain 0.980 %, Temperature 150 °C	@Strain 0.980 %, Temperature 302 °F		
30.38 MPa	4406 psi	DAM; ISO 11403-1 -2	
@Strain 1.43 %, Temperature 180 °C	@Strain 1.43 %, Temperature 356 °F		
33.64 MPa	4879 psi	50%RH; ISO 11403-1 -2	
@Strain 0.330 %, Temperature 0.000 °C	@Strain 0.330 %, Temperature 32.0 °F		
35.53 MPa	5153 psi	DAM; ISO 11403-1 -2	
@Strain 0.370 %, Temperature 40.0 °C	@Strain 0.370 %, Temperature 104 °F		
37.14 MPa	5387 psi	50%RH; ISO 11403-1 -2	
@Strain 1.06 %, Temperature 90.0 °C	@Strain 1.06 %, Temperature 194 °F		

Mechanical Properties	37.88 MPa Metric	5494 psi English	Comments
	@Strain 1.93 %, Temperature 150 °C	@Strain 1.93 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	39.58 MPa	5741 psi	DAM; ISO 11403-1 -2
	@Strain 2.60 %, Temperature 180 °C	@Strain 2.60 %, Temperature 356 °F	
	41.33 MPa	5994 psi	DAM; ISO 11403-1 -2
	@Strain 1.43 %, Temperature 150 °C	@Strain 1.43 %, Temperature 302 °F	
	42.83 MPa	6212 psi	50%RH; ISO 11403-1 -2
	@Strain 0.850 %, Temperature 40.0 °C	@Strain 0.850 %, Temperature 104 °F	
	45.1 MPa	6540 psi	50%RH; ISO 11403-1 -2
	@Strain 2.91 %, Temperature 150 °C	@Strain 2.91 %, Temperature 302 °F	
	45.77 MPa	6638 psi	DAM; ISO 11403-1 -2
	@Strain 3.76 %, Temperature 180 °C	@Strain 3.76 %, Temperature 356 °F	
	45.92 MPa	6660 psi	50%RH; ISO 11403-1 -2
	@Strain 0.760 %, Temperature 23.0 °C	@Strain 0.760 %, Temperature 73.4 °F	
	52.64 MPa	7635 psi	50%RH; ISO 11403-1 -2
	@Strain 1.93 %, Temperature 90.0 °C	@Strain 1.93 %, Temperature 194 °F	
	53.99 MPa	7831 psi	DAM; ISO 11403-1 -2
	@Strain 1.37 %, Temperature 90.0 °C	@Strain 1.37 %, Temperature 194 °F	
	54.69 MPa	7932 psi	DAM; ISO 11403-1 -2
	@Strain 2.57 %, Temperature 150 °C	@Strain 2.57 %, Temperature 302 °F	
	63.52 MPa	9213 psi	DAM; ISO 11403-1 -2
	@Strain 3.75 %, Temperature 150 °C	@Strain 3.75 %, Temperature 302 °F	
	63.66 MPa	9233 psi	50%RH; ISO 11403-1 -2
	@Strain 2.84 %, Temperature 90.0 °C	@Strain 2.84 %, Temperature 194 °F	
	63.75 MPa	9246 psi	50%RH; ISO 11403-1 -2
	@Strain 1.53 %,	@Strain 1.53 %,	

Mechanical Properties	Temperature 40.0 °C Metric	Temperature 104 °F English	Comments
	69.79 MPa @Strain 1.38 %, Temperature 23.0 °C	10120 psi @Strain 1.38 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	70.99 MPa @Strain 0.560 %, Temperature -20.0 °C	10300 psi @Strain 0.560 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	73.26 MPa @Strain 0.650 %, Temperature -20.0 °C	10630 psi @Strain 0.650 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	74.02 MPa @Strain 2.36 %, Temperature 90.0 °C	10740 psi @Strain 2.36 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	74.79 MPa @Strain 0.840 %, Temperature 40.0 °C	10850 psi @Strain 0.840 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	75.42 MPa @Strain 0.830 %, Temperature 0.000 °C	10940 psi @Strain 0.830 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	76.34 MPa @Strain 0.670 %, Temperature 23.0 °C	11070 psi @Strain 0.670 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	81.87 MPa @Strain 2.38 %, Temperature 40.0 °C	11870 psi @Strain 2.38 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	83.18 MPa @Strain 0.730 %, Temperature 0.000 °C	12060 psi @Strain 0.730 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	88.65 MPa @Strain 3.49 %, Temperature 90.0 °C	12860 psi @Strain 3.49 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	90.74 MPa @Strain 2.15 %, Temperature 23.0 °C	13160 psi @Strain 2.15 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	104.32 MPa @Strain 1.31 %, Temperature 0.000 °C	15130 psi @Strain 1.31 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	104.43 MPa	15146 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 1.32 %, Temperature 40.0 °C	@Strain 1.32 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	110.27 MPa	15993 psi	
	@Strain 1.04 %, Temperature -20.0 °C	@Strain 1.04 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	112.55 MPa	16324 psi	
	@Strain 1.05 %, Temperature 23.0 °C	@Strain 1.05 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	121.66 MPa	17645 psi	
	@Strain 5.75 %, Temperature 23.0 °C	@Strain 5.75 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	121.88 MPa	17677 psi	
	@Strain 1.13 %, Temperature 0.000 °C	@Strain 1.13 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	129.33 MPa	18758 psi	
	@Strain 1.88 %, Temperature 0.000 °C	@Strain 1.88 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	129.58 MPa	18794 psi	
	@Strain 1.90 %, Temperature 40.0 °C	@Strain 1.90 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	142.92 MPa	20729 psi	
	@Strain 1.44 %, Temperature 23.0 °C	@Strain 1.44 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	143.73 MPa	20846 psi	
	@Strain 1.49 %, Temperature -20.0 °C	@Strain 1.49 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	156.52 MPa	22701 psi	
	@Strain 1.55 %, Temperature 0.000 °C	@Strain 1.55 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	159.95 MPa	23199 psi	
	@Strain 1.46 %, Temperature -20.0 °C	@Strain 1.46 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	171.1 MPa	24820 psi	
	@Strain 1.94 %, Temperature 23.0 °C	@Strain 1.94 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	174.04 MPa	25242 psi	
	@Strain 2.02 %, Temperature -20.0 °C	@Strain 2.02 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2

Mechanical Properties	Metric: MPa	English:si	Comments
	@Strain 2.05 %, Temperature 0.000 °C	@Strain 2.05 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2

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