

DuPont Performance Polymers Zytel® HTN 54G35HSLR BK031 Polyphthalamide (PPA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 40% Glass Fiber Reinforced

Material Notes:

35% Glass Reinforced Toughened PPA High Performance Polyamide Zytel HTN54G35HSLR BK031 is a 35% glass reinforced toughened heat stabilized hydrolysis resistant high performance polyamide resin. It is also a PPA resin. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-HTN-54G35HSLR-BK031-Polyphthalamide-PPA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	DAM; ISO 1183
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	DAM; ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	166 MPa	24100 psi	50%RH; ISO 527-1/-2
	180 MPa	26100 psi	DAM; ISO 527-1/-2
Tensile Stress	8.18 MPa @Strain 0.200 %, Temperature 160 °C	1190 psi @Strain 0.200 %, Temperature 320 °F	DAM; ISO 11403-1 -2
	10.34 MPa @Strain 0.240 %, Temperature 150 °C	1500 psi @Strain 0.240 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	10.35 MPa @Strain 0.280 %, Temperature 180 °C	1501 psi @Strain 0.280 %, Temperature 356 °F	DAM; ISO 11403-1 -2
	19.46 MPa @Strain 0.660 %, Temperature 150 °C	2822 psi @Strain 0.660 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	23.18 MPa @Strain 0.510 %, Temperature 90.0 °C	3362 psi @Strain 0.510 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	34.46 MPa @Strain 1.68 %,	4998 psi @Strain 1.68 %,	DAM; ISO 11403-1 -2

Mechanical Properties	Temperature 180 °C Metric	Temperature 356 °F English	Comments
	35.54 MPa @Strain 1.88 %, Temperature 150 °C	5155 psi @Strain 1.88 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	38.47 MPa @Strain 0.410 %, Temperature 40.0 °C	5580 psi @Strain 0.410 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	38.99 MPa @Strain 1.46 %, Temperature 150 °C	5655 psi @Strain 1.46 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	41.77 MPa @Strain 0.420 %, Temperature 23.0 °C	6058 psi @Strain 0.420 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	42.56 MPa @Strain 2.96 %, Temperature 150 °C	6173 psi @Strain 2.96 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	42.6 MPa @Strain 2.83 %, Temperature 180 °C	6180 psi @Strain 2.83 %, Temperature 356 °F	DAM; ISO 11403-1 -2
	43.27 MPa @Strain 2.12 %, Temperature 160 °C	6276 psi @Strain 2.12 %, Temperature 320 °F	DAM; ISO 11403-1 -2
	46.19 MPa @Strain 0.520 %, Temperature 90.0 °C	6699 psi @Strain 0.520 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	46.8 MPa @Strain 1.48 %, Temperature 90.0 °C	6790 psi @Strain 1.48 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	47.43 MPa @Strain 4.18 %, Temperature 150 °C	6879 psi @Strain 4.18 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	48.05 MPa @Strain 4.06 %, Temperature 180 °C	6969 psi @Strain 4.06 %, Temperature 356 °F	DAM; ISO 11403-1 -2
	49.84 MPa @Strain 2.55 %, Temperature 150 °C	7229 psi @Strain 2.55 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	50.98 MPa	7394 psi	

Mechanical Properties	Metric	English	DAM; ISO 11403-1 -2 Comments
	@Strain 3.26 %, Temperature 160 °C	@Strain 3.26 %, Temperature 320 °F	
	53.25 MPa	7723 psi	50%RH; ISO 11403-1 -2
	@Strain 0.530 %, Temperature 0.000 °C	@Strain 0.530 %, Temperature 32.0 °F	
	56.27 MPa	8161 psi	DAM; ISO 11403-1 -2
	@Strain 4.49 %, Temperature 160 °C	@Strain 4.49 %, Temperature 320 °F	
	56.53 MPa	8199 psi	DAM; ISO 11403-1 -2
	@Strain 8.18 %, Temperature 180 °C	@Strain 8.18 %, Temperature 356 °F	
	56.83 MPa	8243 psi	DAM; ISO 11403-1 -2
	@Strain 3.74 %, Temperature 150 °C	@Strain 3.74 %, Temperature 302 °F	
	57.85 MPa	8390 psi	50%RH; ISO 11403-1 -2
	@Strain 2.41 %, Temperature 90.0 °C	@Strain 2.41 %, Temperature 194 °F	
	64.81 MPa	9400 psi	50%RH; ISO 11403-1 -2
	@Strain 3.58 %, Temperature 90.0 °C	@Strain 3.58 %, Temperature 194 °F	
	71.62 MPa	10390 psi	50%RH; ISO 11403-1 -2
	@Strain 0.840 %, Temperature 40.0 °C	@Strain 0.840 %, Temperature 104 °F	
	73.53 MPa	10660 psi	50%RH; ISO 11403-1 -2
	@Strain 0.700 %, Temperature -20.0 °C	@Strain 0.700 %, Temperature -4.00 °F	
	74.28 MPa	10770 psi	DAM; ISO 11403-1 -2
	@Strain 0.920 %, Temperature 90.0 °C	@Strain 0.920 %, Temperature 194 °F	
	92.13 MPa	13360 psi	50%RH; ISO 11403-1 -2
	@Strain 0.950 %, Temperature 0.000 °C	@Strain 0.950 %, Temperature 32.0 °F	
	93.07 MPa	13500 psi	50%RH; ISO 11403-1 -2
	@Strain 1.19 %, Temperature 40.0 °C	@Strain 1.19 %, Temperature 104 °F	
	96.7 MPa	14000 psi	DAM; ISO 11403-1 -2
	@Strain 0.990 %, Temperature 23.0 °C	@Strain 0.990 %, Temperature 73.4 °F	

Mechanical Properties	Metric ^{Pa}	English ^{psi}	Comments
	@Strain 1.38 %, Temperature 90.0 °C	@Strain 1.38 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	105.87 MPa	15355 psi	
	@Strain 1.13 %, Temperature 40.0 °C	@Strain 1.13 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	113.12 MPa	16407 psi	
	@Strain 1.64 %, Temperature 40.0 °C	@Strain 1.64 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	113.98 MPa	16531 psi	
	@Strain 1.92 %, Temperature 90.0 °C	@Strain 1.92 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	117.77 MPa	17081 psi	
	@Strain 1.19 %, Temperature 0.000 °C	@Strain 1.19 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	119.44 MPa	17323 psi	
	@Strain 1.28 %, Temperature 0.000 °C	@Strain 1.28 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	123 MPa	17800 psi	
	@Strain 1.24 %, Temperature -20.0 °C	@Strain 1.24 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	126.69 MPa	18375 psi	
	@Strain 1.58 %, Temperature 23.0 °C	@Strain 1.58 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	129.67 MPa	18807 psi	
	@Strain 1.41 %, Temperature 23.0 °C	@Strain 1.41 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	144.07 MPa	20896 psi	
	@Strain 1.65 %, Temperature 0.000 °C	@Strain 1.65 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	146.8 MPa	21290 psi	
	@Strain 2.07 %, Temperature 23.0 °C	@Strain 2.07 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	149.32 MPa	21657 psi	
	@Strain 1.84 %, Temperature 40.0 °C	@Strain 1.84 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	154.64 MPa	22429 psi	

Mechanical Properties	@Strain 1.66 %, Metric Temperature 0.000 °C	@Strain 1.66 %, English Temperature 32.0 °F	DAM; ISO 11403-1 -2 Comments
	154.84 MPa	22458 psi	
	@Strain 1.82 %, Temperature 23.0 °C	@Strain 1.82 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	160.4 MPa	23260 psi	
	@Strain 2.83 %, Temperature 23.0 °C	@Strain 2.83 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	167.73 MPa	24327 psi	
	@Strain 1.81 %, Temperature -20.0 °C	@Strain 1.81 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	168.89 MPa	24495 psi	
	@Strain 2.36 %, Temperature 40.0 °C	@Strain 2.36 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	176.66 MPa	25622 psi	
	@Strain 2.29 %, Temperature 23.0 °C	@Strain 2.29 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	180.28 MPa	26147 psi	
	@Strain 3.17 %, Temperature 40.0 °C	@Strain 3.17 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	183.66 MPa	26638 psi	
	@Strain 2.16 %, Temperature 0.000 °C	@Strain 2.16 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	189.09 MPa	27425 psi	
	@Strain 2.22 %, Temperature -20.0 °C	@Strain 2.22 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	196.56 MPa	28509 psi	
	@Strain 2.28 %, Temperature -20.0 °C	@Strain 2.28 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	206.46 MPa	29945 psi	
	@Strain 2.72 %, Temperature 0.000 °C	@Strain 2.72 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	211.27 MPa	30642 psi	
	@Strain 2.82 %, Temperature -20.0 °C	@Strain 2.82 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	222.55 MPa	32278 psi	
	@Strain 2.86 %, Temperature -20.0 °C	@Strain 2.86 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2

Elongation at Break Mechanical Properties	2.7% Metric	2.7% English	50%RH; ISO 527-1/-2 Comments
	3.0 %	3.0 %	DAM; ISO 527-1/-2
Tensile Modulus	10.5 GPa	1520 ksi	DAM; ISO 527-1/-2
	10.8 GPa	1570 ksi	50%RH; ISO 527-1/-2

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