

DuPont Performance Polymers Zytel® HTN 54G15HSLR BK031 Polyphthalamide (PPA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 20% Glass Fiber Reinforced

Material Notes:

15% Glass Reinforced Toughened PPA High Performance Polyamide Zytel HTN54G15HSLR BK031 is a 15% 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-54G15HSLR-BK031-Polyphthalamide-PPA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.25 g/cc	0.0452 lb/in ³	DAM; ISO 1183
Viscosity Test	82 cm ³ /g	82 cm ³ /g	DAM; sulphuric acid 96%; ISO 307 1157 1628
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 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	118 MPa	17100 psi	50%RH; ISO 527-1/-2
	125 MPa	18100 psi	DAM; ISO 527-1/-2
Tensile Stress	1.46 MPa	212 psi	DAM; ISO 11403-1 -2
	@Strain 0.0700 %, Temperature 150 °C	@Strain 0.0700 %, Temperature 302 °F	
	1.51 MPa	219 psi	50%RH; ISO 11403-1 -2
	@Strain 0.0800 %, Temperature 150 °C	@Strain 0.0800 %, Temperature 302 °F	
	2.19 MPa	318 psi	DAM; ISO 11403-1 -2
	@Strain 0.0400 %, Temperature 90.0 °C	@Strain 0.0400 %, Temperature 194 °F	
	3.28 MPa	476 psi	50%RH; ISO 11403-1 -2
	@Strain 0.0600 %, Temperature 40.0 °C	@Strain 0.0600 %, Temperature 104 °F	
	3.28 MPa	476 psi	50%RH; ISO 11403-1 -2
	@Strain 0.130 %, Temperature 90.0 °C	@Strain 0.130 %, Temperature 194 °F	
	5.88 MPa	853 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 0.105 %, Temperature 40.0 °C	@Strain 0.105 %, Temperature 104 °F	ISO 11403-1 -2
	8.79 MPa	1270 psi	
	@Strain 0.580 %, Temperature 150 °C	@Strain 0.580 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	10.99 MPa	1594 psi	
	@Strain 0.190 %, Temperature 23.0 °C	@Strain 0.190 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	16.74 MPa	2428 psi	
	@Strain 1.04 %, Temperature 150 °C	@Strain 1.04 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	19.78 MPa	2869 psi	
	@Strain 1.75 %, Temperature 150 °C	@Strain 1.75 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	21.95 MPa	3184 psi	
	@Strain 1.14 %, Temperature 90.0 °C	@Strain 1.14 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	25.79 MPa	3741 psi	
	@Strain 3.03 %, Temperature 150 °C	@Strain 3.03 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	25.87 MPa	3752 psi	
	@Strain 0.450 %, Temperature 0.000 °C	@Strain 0.450 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	26.28 MPa	3812 psi	
	@Strain 2.10 %, Temperature 150 °C	@Strain 2.10 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	29.37 MPa	4260 psi	
	@Strain 0.490 %, Temperature 0.000 °C	@Strain 0.490 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	32.1 MPa	4660 psi	
	@Strain 3.19 %, Temperature 150 °C	@Strain 3.19 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	32.55 MPa	4721 psi	
	@Strain 10.45 %, Temperature 150 °C	@Strain 10.45 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	33.94 MPa	4923 psi	
	@Strain 2.30 %, Temperature 90.0 °C	@Strain 2.30 %, Temperature 194 °F	50%RH; ISO 11403-1 -2

Mechanical Properties	MetricMPa	Englishpsi	Comments
	@Strain 0.580 %, Temperature -20.0 °C	@Strain 0.580 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	37.17 MPa	5391 psi	
	@Strain 0.800 %, Temperature 90.0 °C	@Strain 0.800 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	38.82 MPa	5630 psi	
	@Strain 8.44 %, Temperature 150 °C	@Strain 8.44 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	39.76 MPa	5767 psi	
	@Strain 3.81 %, Temperature 90.0 °C	@Strain 3.81 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	41.0 MPa	5950 psi	
	@Strain 0.730 %, Temperature 23.0 °C	@Strain 0.730 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	44.03 MPa	6386 psi	
	@Strain 0.870 %, Temperature 40.0 °C	@Strain 0.870 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	46.31 MPa	6717 psi	
	@Strain 0.780 %, Temperature -20.0 °C	@Strain 0.780 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	51.76 MPa	7507 psi	
	@Strain 0.930 %, Temperature 23.0 °C	@Strain 0.930 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	52.72 MPa	7646 psi	
	@Strain 1.21 %, Temperature 90.0 °C	@Strain 1.21 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	61.97 MPa	8988 psi	
	@Strain 1.07 %, Temperature 0.000 °C	@Strain 1.07 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	64.81 MPa	9400 psi	
	@Strain 1.42 %, Temperature 40.0 °C	@Strain 1.42 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	65.83 MPa	9548 psi	
	@Strain 1.68 %, Temperature 90.0 °C	@Strain 1.68 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	68.46 MPa	9929 psi	
			DAM; ISO 11403-1 -2

Mechanical Properties	Metric @Strain 1.23 %, Temperature 0.000 °C	English @Strain 1.23 %, Temperature 32.0 °F	Comments
	70.74 MPa	10260 psi	
	@Strain 1.36 %, Temperature 40.0 °C	@Strain 1.36 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	73.54 MPa	10670 psi	
	@Strain 1.41 %, Temperature 23.0 °C	@Strain 1.41 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	76.12 MPa	11040 psi	
	@Strain 1.43 %, Temperature 23.0 °C	@Strain 1.43 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	77.41 MPa	11230 psi	
	@Strain 1.91 %, Temperature 40.0 °C	@Strain 1.91 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	82.59 MPa	11980 psi	
	@Strain 1.46 %, Temperature -20.0 °C	@Strain 1.46 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	82.86 MPa	12020 psi	
	@Strain 1.44 %, Temperature -20.0 °C	@Strain 1.44 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	86.51 MPa	12550 psi	
	@Strain 1.59 %, Temperature 0.000 °C	@Strain 1.59 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	88.38 MPa	12820 psi	
	@Strain 1.84 %, Temperature 23.0 °C	@Strain 1.84 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	91.4 MPa	13300 psi	
	@Strain 1.71 %, Temperature 0.000 °C	@Strain 1.71 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	91.9 MPa	13300 psi	
	@Strain 1.91 %, Temperature 40.0 °C	@Strain 1.91 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	98.87 MPa	14340 psi	
	@Strain 1.99 %, Temperature 23.0 °C	@Strain 1.99 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	99.64 MPa	14450 psi	
	@Strain 1.82 %, Temperature -20.0 °C	@Strain 1.82 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2

Mechanical Properties	101.68 MPa Metric	14747 psi English	Comments 50%RH, ISO 11403-1 -2
	@Strain 2.00 %, Temperature 0.000 °C	@Strain 2.00 %, Temperature 32.0 °F	
	104.9 MPa	15210 psi	50%RH; ISO 11403-1 -2
	@Strain 1.95 %, Temperature -20.0 °C	@Strain 1.95 %, Temperature -4.00 °F	
	105.67 MPa	15326 psi	DAM; ISO 11403-1 -2
	@Strain 2.45 %, Temperature 40.0 °C	@Strain 2.45 %, Temperature 104 °F	
	106.38 MPa	15429 psi	DAM; ISO 11403-1 -2
	@Strain 2.08 %, Temperature 0.000 °C	@Strain 2.08 %, Temperature 32.0 °F	
	113.82 MPa	16508 psi	DAM; ISO 11403-1 -2
	@Strain 2.53 %, Temperature 23.0 °C	@Strain 2.53 %, Temperature 73.4 °F	
	114.77 MPa	16646 psi	DAM; ISO 11403-1 -2
	@Strain 2.18 %, Temperature -20.0 °C	@Strain 2.18 %, Temperature -4.00 °F	
	120.69 MPa	17505 psi	50%RH; ISO 11403-1 -2
	@Strain 2.42 %, Temperature -20.0 °C	@Strain 2.42 %, Temperature -4.00 °F	
Elongation at Break	3.0 %	3.0 %	50%RH; ISO 527-1/-2
	3.5 %	3.5 %	DAM; ISO 527-1/-2
Tensile Modulus	5.50 GPa	798 ksi	DAM; ISO 527-1/-2
	6.10 GPa	885 ksi	50%RH; ISO 527-1/-2
Flexural Strength	210 MPa	30500 psi	DAM; ISO 178
Flexural Modulus	4.90 GPa	711 ksi	DAM; ISO 178
Secant Modulus	3.62 GPa	524 ksi	50%RH; ISO 11403-1 -2
	@Strain 2.32 %, Temperature 40.0 °C	@Strain 2.32 %, Temperature 104 °F	
	3.84 GPa	557 ksi	DAM; ISO 11403-1 -2
	@Strain 2.92 %, Temperature 40.0 °C	@Strain 2.92 %, Temperature 104 °F	
	4.03 GPa	585 ksi	DAM; ISO 11403-1 -2
	@Strain 3.02 %, Temperature 23.0 °C	@Strain 3.02 %, Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
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