

DuPont Performance Polymers Zytel® HTN FR52G30NH NC010 Polyphthalamide (PPA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 30% Glass Fiber Reinforced

Material Notes:

30% Glass Reinforced Flame Retardant Non-Halogenated PPA High Performance Polyamide Zytel HTNFR52G30NH NC010 is a 30% glass reinforced flame retardant lubricated high performance polyamide resin. It is also a PPA resin and it uses a non-halogenated flammability information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-HTN-FR52G30NH-NC010-Polyphthalamide-PPA-Unverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.44 g/cc	0.0520 lb/in ³	DAM; ISO 1183
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	DAM; ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	130 MPa	18900 psi	50%RH; ISO 527-1/-2
	150 MPa	21800 psi	DAM; ISO 527-1/-2
Tensile Stress	9.87 MPa	1430 psi	50%RH; ISO 11403-1 -2
	@Strain 0.200 %, Temperature 150 °C	@Strain 0.200 %, Temperature 302 °F	
	11.62 MPa	1685 psi	50%RH; ISO 11403-1 -2
	@Strain 0.110 %, Temperature 40.0 °C	@Strain 0.110 %, Temperature 104 °F	
	12.69 MPa	1841 psi	50%RH; ISO 11403-1 -2
	@Strain 0.110 %, Temperature -40.0 °C	@Strain 0.110 %, Temperature -40.0 °F	
	13.04 MPa	1891 psi	50%RH; ISO 11403-1 -2
	@Strain 0.110 %, Temperature 23.0 °C	@Strain 0.110 %, Temperature 73.4 °F	
	13.14 MPa	1906 psi	DAM; ISO 11403-1 -2
	@Strain 0.270 %, Temperature 175 °C	@Strain 0.270 %, Temperature 347 °F	
	13.72 MPa	1990 psi	DAM; ISO 11403-1 -2
	@Strain 0.270 %,	@Strain 0.270 %,	

Mechanical Properties	Temperature 150 °C Metric	Temperature 302 °F English	Comments
	17.16 MPa	2489 psi	
	@Strain 0.140 %, Temperature 23.0 °C	@Strain 0.140 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	19.61 MPa	2844 psi	
	@Strain 0.160 %, Temperature -40.0 °C	@Strain 0.160 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	31.31 MPa	4541 psi	
	@Strain 0.870 %, Temperature 150 °C	@Strain 0.870 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	34.48 MPa	5001 psi	
	@Strain 1.03 %, Temperature 175 °C	@Strain 1.03 %, Temperature 347 °F	DAM; ISO 11403-1 -2
	36.87 MPa	5348 psi	
	@Strain 1.01 %, Temperature 150 °C	@Strain 1.01 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	43.17 MPa	6261 psi	
	@Strain 0.440 %, Temperature 40.0 °C	@Strain 0.440 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	43.52 MPa	6312 psi	
	@Strain 1.57 %, Temperature 150 °C	@Strain 1.57 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	46.16 MPa	6695 psi	
	@Strain 0.440 %, Temperature 23.0 °C	@Strain 0.440 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	46.47 MPa	6740 psi	
	@Strain 1.85 %, Temperature 175 °C	@Strain 1.85 %, Temperature 347 °F	DAM; ISO 11403-1 -2
	49.45 MPa	7172 psi	
	@Strain 1.73 %, Temperature 150 °C	@Strain 1.73 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	50.65 MPa	7346 psi	
	@Strain 2.30 %, Temperature 150 °C	@Strain 2.30 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	52.7 MPa	7640 psi	
	@Strain 0.470 %, Temperature -40.0 °C	@Strain 0.470 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	52.78 MPa	7655 psi	

Mechanical Properties	Metric	English	DAM; ISO 11403-1 -2 Comments
	@Strain 0.470 %, Temperature 23.0 °C	@Strain 0.470 %, Temperature 73.4 °F	
	53.31 MPa	7732 psi	
	@Strain 2.79 %, Temperature 175 °C	@Strain 2.79 %, Temperature 347 °F	DAM; ISO 11403-1 -2
	58.12 MPa	8430 psi	
	@Strain 2.61 %, Temperature 150 °C	@Strain 2.61 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	59.93 MPa	8692 psi	
	@Strain 0.540 %, Temperature -40.0 °C	@Strain 0.540 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	64.99 MPa	9426 psi	
	@Strain 0.750 %, Temperature 40.0 °C	@Strain 0.750 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	70.7 MPa	10300 psi	
	@Strain 0.740 %, Temperature 23.0 °C	@Strain 0.740 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	76.73 MPa	11130 psi	
	@Strain 0.740 %, Temperature 23.0 °C	@Strain 0.740 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	81.39 MPa	11800 psi	
	@Strain 1.06 %, Temperature 40.0 °C	@Strain 1.06 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	85.54 MPa	12410 psi	
	@Strain 0.810 %, Temperature -40.0 °C	@Strain 0.810 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	87.91 MPa	12750 psi	
	@Strain 1.01 %, Temperature 23.0 °C	@Strain 1.01 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	92.6 MPa	13400 psi	
	@Strain 0.890 %, Temperature -40.0 °C	@Strain 0.890 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	100.96 MPa	14643 psi	
	@Strain 1.06 %, Temperature 23.0 °C	@Strain 1.06 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	111.33 MPa	16147 psi	
	@Strain 1.13 %, Temperature -40.0 °C	@Strain 1.13 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2

Mechanical Properties	Metric ^{MPa}	English ^{psi}	Comments
	@Strain 2.21 %, Temperature 40.0 °C	@Strain 2.21 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	124.37 MPa	18038 psi	
	@Strain 1.29 %, Temperature -40.0 °C	@Strain 1.29 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	125 MPa	18100 psi	
	@Strain 1.97 %, Temperature 23.0 °C	@Strain 1.97 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
Elongation at Break	2.0 %	2.0 %	50%RH; ISO 527-1/-2
	2.2 %	2.2 %	DAM; ISO 527-1/-2
Tensile Modulus	10.5 GPa	1520 ksi	DAM; ISO 527-1/-2
	10.5 GPa	1520 ksi	50%RH; ISO 527-1/-2
Flexural Strength	200 MPa	29000 psi	50%RH; ISO 178
	230 MPa	33400 psi	DAM; ISO 178
Flexural Modulus	9.00 GPa	1310 ksi	DAM; ISO 178
	10.0 GPa	1450 ksi	50%RH; ISO 178
Secant Modulus	1.98 GPa	287 ksi	
	@Strain 3.45 %, Temperature 100 °C	@Strain 3.45 %, Temperature 212 °F	50%RH; ISO 11403-1 -2
	2.69 GPa	390 ksi	
	@Strain 2.38 %, Temperature 100 °C	@Strain 2.38 %, Temperature 212 °F	50%RH; ISO 11403-1 -2
	2.85 GPa	414 ksi	
	@Strain 3.14 %, Temperature 100 °C	@Strain 3.14 %, Temperature 212 °F	DAM; ISO 11403-1 -2
	3.562 GPa	516.6 ksi	
	@Strain 1.50 %, Temperature 100 °C	@Strain 1.50 %, Temperature 212 °F	50%RH; ISO 11403-1 -2
	3.80 GPa	551 ksi	
	@Strain 2.17 %, Temperature 100 °C	@Strain 2.17 %, Temperature 212 °F	DAM; ISO 11403-1 -2
	4.80 GPa	697 ksi	
	@Strain 1.36 %, Temperature 100 °C	@Strain 1.36 %, Temperature 212 °F	DAM; ISO 11403-1 -2

Mechanical Properties	Metric	English	Comments
	4.64 GPa @Strain 0.700 %, Temperature 100 °C	700 ksi @Strain 0.700 %, Temperature 212 °F	50%RH; ISO 11403-1 -2
	5.18 GPa @Strain 2.11 %, Temperature 80.0 °C	751 ksi @Strain 2.11 %, Temperature 176 °F	DAM; ISO 11403-1 -2
	6.07 GPa @Strain 1.75 %, Temperature 40.0 °C	880 ksi @Strain 1.75 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	6.14 GPa @Strain 0.710 %, Temperature 100 °C	891 ksi @Strain 0.710 %, Temperature 212 °F	DAM; ISO 11403-1 -2
	6.42 GPa @Strain 1.47 %, Temperature 80.0 °C	931 ksi @Strain 1.47 %, Temperature 176 °F	DAM; ISO 11403-1 -2
	6.43 GPa @Strain 0.110 %, Temperature 100 °C	932 ksi @Strain 0.110 %, Temperature 212 °F	50%RH; ISO 11403-1 -2
	7.14 GPa @Strain 1.27 %, Temperature 40.0 °C	1040 ksi @Strain 1.27 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	7.16 GPa @Strain 1.61 %, Temperature 23.0 °C	1040 ksi @Strain 1.61 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	7.74 GPa @Strain 0.930 %, Temperature 80.0 °C	1120 ksi @Strain 0.930 %, Temperature 176 °F	DAM; ISO 11403-1 -2
	7.79 GPa @Strain 0.190 %, Temperature 100 °C	1130 ksi @Strain 0.190 %, Temperature 212 °F	DAM; ISO 11403-1 -2
	7.80 GPa @Strain 1.83 %, Temperature 23.0 °C	1130 ksi @Strain 1.83 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	8.07 GPa @Strain 2.22 %, Temperature -40.0 °C	1170 ksi @Strain 2.22 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2

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