

DuPont Performance Polymers Zytel® HTN FE8200 NC010 Polyphthalamide (PPA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA)

Material Notes:

Unreinforced Toughened PPA High Performance Polyamide Zytel HTNFE8200 NC010 is an unreinforced toughened heat stabilized lubricated high performance polyamide resin for injection molding. 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-FE8200-NC010-Polyphthalamide-PPA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.13 g/cc	0.0408 lb/in ³	DAM; ISO 1183
Water Absorption	6.3 % @Thickness 2.00 mm	6.3 % @Thickness 0.0787 in	DAM; Sim. to ISO 62
Moisture Absorption	1.90 % @Thickness 2.00 mm	1.90 % @Thickness 0.0787 in	DAM; Sim. to ISO 62
Linear Mold Shrinkage, Flow	0.0080 cm/cm	0.0080 in/in	DAM; ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Stress	0.400 MPa @Strain 0.160 %, Temperature 150 °C	58.0 psi @Strain 0.160 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	0.500 MPa @Strain 0.150 %, Temperature 150 °C	72.5 psi @Strain 0.150 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	1.34 MPa @Strain 0.0700 %, Temperature -40.0 °C	194 psi @Strain 0.0700 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	1.37 MPa @Strain 0.0500 %, Temperature -20.0 °C	199 psi @Strain 0.0500 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	1.39 MPa @Strain 0.120 %, Temperature 90.0 °C	202 psi @Strain 0.120 %, Temperature 194 °F	50%RH; ISO 11403-1 -2

Mechanical Properties	1.83 MPa Metric	265 psi English	Comments 50%RH; ISO 11403-1 -2
	@Strain 0.0700 %, Temperature -20.0 °C	@Strain 0.0700 %, Temperature -4.00 °F	
	1.83 MPa	265 psi	
	@Strain 0.0600 %, Temperature -40.0 °C	@Strain 0.0600 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	2.08 MPa	302 psi	
	@Strain 0.0900 %, Temperature 90.0 °C	@Strain 0.0900 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	2.22 MPa	322 psi	
	@Strain 0.100 %, Temperature 23.0 °C	@Strain 0.100 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	2.28 MPa	331 psi	
	@Strain 0.100 %, Temperature 40.0 °C	@Strain 0.100 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	2.41 MPa	350 psi	
	@Strain 0.110 %, Temperature 40.0 °C	@Strain 0.110 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	2.66 MPa	386 psi	
	@Strain 0.120 %, Temperature 0.000 °C	@Strain 0.120 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	2.68 MPa	389 psi	
	@Strain 0.110 %, Temperature 0.000 °C	@Strain 0.110 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	2.73 MPa	396 psi	
	@Strain 0.110 %, Temperature 23.0 °C	@Strain 0.110 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	4.42 MPa	641 psi	
	@Strain 1.96 %, Temperature 150 °C	@Strain 1.96 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	4.75 MPa	689 psi	
	@Strain 1.95 %, Temperature 150 °C	@Strain 1.95 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	5.55 MPa	805 psi	
	@Strain 0.230 %, Temperature -20.0 °C	@Strain 0.230 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	5.78 MPa	838 psi	
	@Strain 0.250 %,	@Strain 0.250 %,	DAM; ISO 11403-1 -2

Mechanical Properties	Temperature -40.0 °C Metric	Temperature -40.0 °F English	Comments
	6.49 MPa	941 psi	
	@Strain 0.230 %, Temperature -40.0 °C	@Strain 0.230 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	7.55 MPa	1100 psi	
	@Strain 4.24 %, Temperature 150 °C	@Strain 4.24 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	7.58 MPa	1100 psi	
	@Strain 4.35 %, Temperature 150 °C	@Strain 4.35 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	8.42 MPa	1220 psi	
	@Strain 0.310 %, Temperature -20.0 °C	@Strain 0.310 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	8.87 MPa	1290 psi	
	@Strain 6.72 %, Temperature 150 °C	@Strain 6.72 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	9.36 MPa	1360 psi	
	@Strain 6.86 %, Temperature 150 °C	@Strain 6.86 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	10.1 MPa	1460 psi	
	@Strain 14.98 %, Temperature 150 °C	@Strain 14.98 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	10.39 MPa	1507 psi	
	@Strain 20.0 %, Temperature 150 °C	@Strain 20.0 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	11.69 MPa	1695 psi	
	@Strain 15.03 %, Temperature 150 °C	@Strain 15.03 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	12.24 MPa	1775 psi	
	@Strain 20.01 %, Temperature 150 °C	@Strain 20.01 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	13.78 MPa	1999 psi	
	@Strain 1.43 %, Temperature 90.0 °C	@Strain 1.43 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	16.03 MPa	2325 psi	
	@Strain 0.870 %, Temperature 90.0 °C	@Strain 0.870 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	17.91 MPa	2598 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 20.01 %, Temperature 90.0 °C	@Strain 20.01 %, Temperature 194 °F	ISO 11403-1 -2
	18.15 MPa	2632 psi	50%RH; ISO 11403-1 -2
	@Strain 14.9 %, Temperature 90.0 °C	@Strain 14.9 %, Temperature 194 °F	
	18.39 MPa	2667 psi	50%RH; ISO 11403-1 -2
	@Strain 0.790 %, Temperature 40.0 °C	@Strain 0.790 %, Temperature 104 °F	
	19.35 MPa	2806 psi	DAM; ISO 11403-1 -2
	@Strain 0.950 %, Temperature 40.0 °C	@Strain 0.950 %, Temperature 104 °F	
	19.36 MPa	2808 psi	50%RH; ISO 11403-1 -2
	@Strain 6.09 %, Temperature 90.0 °C	@Strain 6.09 %, Temperature 194 °F	
	19.55 MPa	2835 psi	50%RH; ISO 11403-1 -2
	@Strain 3.53 %, Temperature 90.0 °C	@Strain 3.53 %, Temperature 194 °F	
	20.71 MPa	3004 psi	50%RH; ISO 11403-1 -2
	@Strain 0.860 %, Temperature 23.0 °C	@Strain 0.860 %, Temperature 73.4 °F	
	21.82 MPa	3165 psi	DAM; ISO 11403-1 -2
	@Strain 1.00 %, Temperature 23.0 °C	@Strain 1.00 %, Temperature 73.4 °F	
	22.45 MPa	3256 psi	DAM; ISO 11403-1 -2
	@Strain 0.940 %, Temperature -20.0 °C	@Strain 0.940 %, Temperature -4.00 °F	
	24.69 MPa	3581 psi	50%RH; ISO 11403-1 -2
	@Strain 1.00 %, Temperature 0.000 °C	@Strain 1.00 %, Temperature 32.0 °F	
	24.79 MPa	3595 psi	50%RH; ISO 11403-1 -2
	@Strain 0.870 %, Temperature -40.0 °C	@Strain 0.870 %, Temperature -40.0 °F	
	25.47 MPa	3694 psi	DAM; ISO 11403-1 -2
	@Strain 1.02 %, Temperature -40.0 °C	@Strain 1.02 %, Temperature -40.0 °F	
	27.96 MPa	4055 psi	DAM; ISO 11403-1 -2
	@Strain 1.24 %,	@Strain 1.24 %,	

Mechanical Properties	Temperature 0.000 °C	Temperature 32.0 °F	Comments
	Metric 32.77 MPa	English 4793 psi	
	@Strain 1.28 %, Temperature -20.0 °C	@Strain 1.28 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	34.82 MPa	5050 psi	
	@Strain 2.10 %, Temperature 90.0 °C	@Strain 2.10 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	37.5 MPa	5440 psi	
	@Strain 20.0 %, Temperature 90.0 °C	@Strain 20.0 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	38.82 MPa	5630 psi	
	@Strain 13.99 %, Temperature 90.0 °C	@Strain 13.99 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	39.05 MPa	5664 psi	
	@Strain 1.77 %, Temperature -20.0 °C	@Strain 1.77 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	40.67 MPa	5899 psi	
	@Strain 2.14 %, Temperature 40.0 °C	@Strain 2.14 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	41.81 MPa	6064 psi	
	@Strain 1.81 %, Temperature -40.0 °C	@Strain 1.81 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	42.04 MPa	6097 psi	
	@Strain 2.00 %, Temperature 40.0 °C	@Strain 2.00 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	43.42 MPa	6298 psi	
	@Strain 1.63 %, Temperature -40.0 °C	@Strain 1.63 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	44.67 MPa	6479 psi	
	@Strain 2.24 %, Temperature 23.0 °C	@Strain 2.24 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	45.11 MPa	6543 psi	
	@Strain 3.74 %, Temperature 90.0 °C	@Strain 3.74 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	46.09 MPa	6685 psi	
	@Strain 20.01 %, Temperature 40.0 °C	@Strain 20.01 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	46.67 MPa	6769 psi	

Mechanical Properties	Metric	English	50%RH; ISO 11403-1 -2 Comments
	@Strain 2.14 %, Temperature 23.0 °C	@Strain 2.14 %, Temperature 73.4 °F	
	47.8 MPa	6930 psi	
	@Strain 13.94 %, Temperature 40.0 °C	@Strain 13.94 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	50.13 MPa	7271 psi	
	@Strain 2.13 %, Temperature -20.0 °C	@Strain 2.13 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	51.19 MPa	7424 psi	
	@Strain 2.28 %, Temperature 0.000 °C	@Strain 2.28 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2

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