

DuPont Performance Polymers Hytrel® 4556 Polyester Elastomer TPC-ET (Unverified Data**)

Category : Polymer , Thermoplastic , Polyester, TP , Polyester Thermoplastic Elastomer

Material Notes:

45 Shore D High Performance Polyester Elastomer Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Hytrel-4556-Polyester-Elastomer-TPC-ET-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in ³	ISO 1183
Water Absorption	0.60 % @Thickness 2.00 mm	0.60 % @Thickness 0.0787 in	Sim. to ISO 62
Moisture Absorption	0.200 % @Thickness 2.00 mm	0.200 % @Thickness 0.0787 in	Sim. to ISO 62
Water Absorption at Saturation	0.60 %	0.60 %	Immersion 24h; ASTM D570
Linear Mold Shrinkage, Flow	0.011 cm/cm	0.011 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO 294-4 2577
Melt Flow	7.5 g/10 min @Load 2.16 kg, Temperature 220 °C	7.5 g/10 min @Load 4.76 lb, Temperature 428 °F	cm ³ /10min; ISO 1133
	8.5 g/10 min @Load 2.16 kg, Temperature 220 °C	8.5 g/10 min @Load 4.76 lb, Temperature 428 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	42	42	15s; ISO 868
	<= 45	<= 45	ISO 868
Tensile Strength at Break	34.0 MPa	4930 psi	ISO 527-1/-2
Tensile Stress	5.70 MPa @Strain 10.0 %	827 psi @Strain 10.0 %	ISO 527-1/-2
	9.80 MPa @Strain 50.0 %	1420 psi @Strain 50.0 %	ISO 527-1/-2
	11.0 MPa	1600 psi	

Mechanical Properties	Metric @Strain 100 %	English @Strain 100 %	ISO 527-1/-2 Comments
	17.0 MPa @Strain 300 %	2470 psi @Strain 300 %	ISO 527-1/-2
	0.490 MPa @Strain 0.220 %, Temperature 120 °C	71.1 psi @Strain 0.220 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	0.520 MPa @Strain 0.230 %, Temperature 100 °C	75.4 psi @Strain 0.230 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	0.540 MPa @Strain 0.230 %, Temperature 90.0 °C	78.3 psi @Strain 0.230 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	0.570 MPa @Strain 0.240 %, Temperature 60.0 °C	82.7 psi @Strain 0.240 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	0.590 MPa @Strain 0.240 %, Temperature 40.0 °C	85.6 psi @Strain 0.240 %, Temperature 104 °F	TPE; ISO 11403-1 -2
	0.650 MPa @Strain 0.250 %, Temperature 23.0 °C	94.3 psi @Strain 0.250 %, Temperature 73.4 °F	TPE; ISO 11403-1 -2
	0.660 MPa @Strain 0.220 %, Temperature 0.000 °C	95.7 psi @Strain 0.220 %, Temperature 32.0 °F	TPE; ISO 11403-1 -2
	0.740 MPa @Strain 0.230 %, Temperature -20.0 °C	107 psi @Strain 0.230 %, Temperature -4.00 °F	TPE; ISO 11403-1 -2
	0.790 MPa @Strain 0.230 %, Temperature -40.0 °C	115 psi @Strain 0.230 %, Temperature -40.0 °F	TPE; ISO 11403-1 -2
	3.57 MPa @Strain 13.66 %, Temperature 120 °C	518 psi @Strain 13.66 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	4.35 MPa @Strain 36.25 %, Temperature 120 °C	631 psi @Strain 36.25 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	4.51 MPa	654 psi	

Mechanical Properties	Metric	English	TPE; ISO 11403-1 -2 Comments
	@Strain 16.88 %, Temperature 100 °C	@Strain 16.88 %, Temperature 212 °F	
	4.55 MPa	660 psi	
	@Strain 59.97 %, Temperature 120 °C	@Strain 59.97 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	4.68 MPa	679 psi	
	@Strain 13.76 %, Temperature 90.0 °C	@Strain 13.76 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	4.75 MPa	689 psi	
	@Strain 82.17 %, Temperature 120 °C	@Strain 82.17 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	5.08 MPa	737 psi	
	@Strain 108.54 %, Temperature 120 °C	@Strain 108.54 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	5.28 MPa	766 psi	
	@Strain 39.03 %, Temperature 100 °C	@Strain 39.03 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	5.48 MPa	795 psi	
	@Strain 131.34 %, Temperature 120 °C	@Strain 131.34 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	5.51 MPa	799 psi	
	@Strain 62.75 %, Temperature 100 °C	@Strain 62.75 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	5.74 MPa	833 psi	
	@Strain 15.77 %, Temperature 60.0 °C	@Strain 15.77 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	5.79 MPa	840 psi	
	@Strain 85.8 %, Temperature 100 °C	@Strain 85.8 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	5.82 MPa	844 psi	
	@Strain 34.96 %, Temperature 90.0 °C	@Strain 34.96 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	5.93 MPa	860 psi	
	@Strain 151.87 %, Temperature 120 °C	@Strain 151.87 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	6.08 MPa	882 psi	
	@Strain 57.62 %, Temperature 90.0 °C	@Strain 57.62 %, Temperature 194 °F	TPE; ISO 11403-1 -2

Mechanical Properties	Metric ^{MPa}	English	Comments
	@Strain 112.58 %, Temperature 100 °C	@Strain 112.58 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	6.21 MPa	901 psi	
	@Strain 13.8 %, Temperature 40.0 °C	@Strain 13.8 %, Temperature 104 °F	TPE; ISO 11403-1 -2
	6.36 MPa	922 psi	
	@Strain 80.48 %, Temperature 90.0 °C	@Strain 80.48 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	6.40 MPa	928 psi	
	@Strain 171.15 %, Temperature 120 °C	@Strain 171.15 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	6.70 MPa	972 psi	
	@Strain 135.53 %, Temperature 100 °C	@Strain 135.53 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	6.81 MPa	988 psi	
	@Strain 108.12 %, Temperature 90.0 °C	@Strain 108.12 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	6.97 MPa	1010 psi	
	@Strain 35.94 %, Temperature 60.0 °C	@Strain 35.94 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	7.13 MPa	1030 psi	
	@Strain 198.69 %, Temperature 120 °C	@Strain 198.69 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	7.22 MPa	1050 psi	
	@Strain 156.5 %, Temperature 100 °C	@Strain 156.5 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	7.33 MPa	1060 psi	
	@Strain 132.05 %, Temperature 90.0 °C	@Strain 132.05 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	7.33 MPa	1060 psi	
	@Strain 14.02 %, Temperature 23.0 °C	@Strain 14.02 %, Temperature 73.4 °F	TPE; ISO 11403-1 -2
	7.37 MPa	1070 psi	
	@Strain 57.56 %, Temperature 60.0 °C	@Strain 57.56 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	7.59 MPa	1100 psi	

Mechanical Properties	Metric @Strain 215.82 %, Temperature 120 °C	English @Strain 215.82 %, Temperature 248 °F	TPE; ISO 11403-1 -2 Comments
	7.77 MPa	1130 psi	
	@Strain 176.38 %, Temperature 100 °C	@Strain 176.38 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	7.77 MPa	1130 psi	
	@Strain 78.7 %, Temperature 60.0 °C	@Strain 78.7 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	7.89 MPa	1140 psi	
	@Strain 33.37 %, Temperature 40.0 °C	@Strain 33.37 %, Temperature 104 °F	TPE; ISO 11403-1 -2
	7.89 MPa	1140 psi	
	@Strain 153.83 %, Temperature 90.0 °C	@Strain 153.83 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	7.96 MPa	1150 psi	
	@Strain 232.29 %, Temperature 120 °C	@Strain 232.29 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	8.35 MPa	1210 psi	
	@Strain 104.31 %, Temperature 60.0 °C	@Strain 104.31 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	8.42 MPa	1220 psi	
	@Strain 54.54 %, Temperature 40.0 °C	@Strain 54.54 %, Temperature 104 °F	TPE; ISO 11403-1 -2
	8.47 MPa	1230 psi	
	@Strain 174.29 %, Temperature 90.0 °C	@Strain 174.29 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	8.50 MPa	1230 psi	
	@Strain 249.44 %, Temperature 120 °C	@Strain 249.44 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	8.62 MPa	1250 psi	
	@Strain 204.54 %, Temperature 100 °C	@Strain 204.54 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.83 MPa	1280 psi	
	@Strain 15.27 %, Temperature 0.000 °C	@Strain 15.27 %, Temperature 32.0 °F	TPE; ISO 11403-1 -2
	8.87 MPa	1290 psi	
	@Strain 75.25 %, Temperature 40.0 °C	@Strain 75.25 %, Temperature 104 °F	TPE; ISO 11403-1 -2

Mechanical Properties	8.95 MPa Metric	1300 psi English	Comments
	@Strain 127.48 %, Temperature 60.0 °C	@Strain 127.48 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	9.14 MPa @Strain 221.82 %, Temperature 100 °C	1330 psi @Strain 221.82 %, Temperature 212 °F	TPE; ISO 11403-1 -2

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