

DuPont Performance Polymers Hytrel® 4056 Polyester Elastomer TPC-ET (Unverified Data**)

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

Material Notes:

40 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-4056-Polyester-Elastomer-TPC-ET-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.02 g/cc	0.0368 lb/in ³	
	1.16 g/cc	0.0419 lb/in ³	ISO 1183
Water Absorption	0.70 %	0.70 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	0.200 %	0.200 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Water Absorption at Saturation	0.60 %	0.60 %	Immersion 24h; ASTM D570
Viscosity	102000 cP	102000 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 230 °C	@Shear Rate 5000 1/s, Temperature 446 °F	
	117000 cP	117000 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 210 °C	@Shear Rate 5000 1/s, Temperature 410 °F	
	134000 cP	134000 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 190 °C	@Shear Rate 5000 1/s, Temperature 374 °F	
	267000 cP	267000 cP	ISO 11403-1 -2
@Shear Rate 500 1/s, Temperature 230 °C	@Shear Rate 500 1/s, Temperature 446 °F		
352000 cP	@Shear Rate 500 1/s, Temperature 210 °C	@Shear Rate 500 1/s, Temperature 410 °F	ISO 11403-1 -2
	461000 cP	461000 cP	
461000 cP	@Shear Rate 500 1/s, Temperature 190 °C	@Shear Rate 500 1/s, Temperature 374 °F	ISO 11403-1 -2
	0.0020 cm/cm	0.0020 in/in	
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ISO 294-4 2577

Linear Mold Shrinkage, Transverse Physical Properties	0.0040 cm/cm Metric	0.0040 in/in English	ISO 294-4 2577 Comments
Melt Flow	5.0 g/10 min	5.0 g/10 min	cm ³ /10min; ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	5.6 g/10 min	5.6 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	37	37	15s; ISO 868
	<= 43	<= 43	ISO 868
Tensile Strength at Break	26.0 MPa	3770 psi	ISO 527-1/-2
Tensile Stress	2.40 MPa	348 psi	ISO 527-1/-2
	@Strain 5.00 %	@Strain 5.00 %	
	4.60 MPa	667 psi	ISO 527-1/-2
	@Strain 10.0 %	@Strain 10.0 %	
	8.40 MPa	1220 psi	ISO 527-1/-2
	@Strain 50.0 %	@Strain 50.0 %	
	0.850 MPa	123 psi	TPE; ISO 11403-1 -2
	@Strain 6.36 %, Temperature 120 °C	@Strain 6.36 %, Temperature 248 °F	
	1.36 MPa	197 psi	TPE; ISO 11403-1 -2
	@Strain 14.38 %, Temperature 120 °C	@Strain 14.38 %, Temperature 248 °F	
	1.36 MPa	197 psi	TPE; ISO 11403-1 -2
	@Strain 5.82 %, Temperature 100 °C	@Strain 5.82 %, Temperature 212 °F	
	1.56 MPa	226 psi	ISO 11403-1 -2
	@Strain 6.00 %, Temperature 90.0 °C	@Strain 6.00 %, Temperature 194 °F	
	1.68 MPa	244 psi	TPE; ISO 11403-1 -2
	@Strain 23.08 %, Temperature 120 °C	@Strain 23.08 %, Temperature 248 °F	
	1.70 MPa	247 psi	TPE; ISO 11403-1 -2
	@Strain 6.03 %,	@Strain 6.03 %,	

Mechanical Properties	Temperature 90.0 °C Metric	Temperature 194 °F English	Comments
	1.87 MPa @Strain 31.78 %, Temperature 120 °C	271 psi @Strain 31.78 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	1.99 MPa @Strain 40.48 %, Temperature 120 °C	289 psi @Strain 40.48 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	2.09 MPa @Strain 51.85 %, Temperature 120 °C	303 psi @Strain 51.85 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	2.12 MPa @Strain 5.92 %, Temperature 60.0 °C	307 psi @Strain 5.92 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	2.16 MPa @Strain 63.22 %, Temperature 120 °C	313 psi @Strain 63.22 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	2.23 MPa @Strain 74.6 %, Temperature 120 °C	323 psi @Strain 74.6 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	2.30 MPa @Strain 86.64 %, Temperature 120 °C	334 psi @Strain 86.64 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	2.35 MPa @Strain 14.73 %, Temperature 100 °C	341 psi @Strain 14.73 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	2.40 MPa @Strain 103.36 %, Temperature 120 °C	348 psi @Strain 103.36 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	2.46 MPa @Strain 114.74 %, Temperature 120 °C	357 psi @Strain 114.74 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	2.56 MPa @Strain 129.46 %, Temperature 120 °C	371 psi @Strain 129.46 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	2.64 MPa @Strain 6.00 %, Temperature 40.0 °C	383 psi @Strain 6.00 %, Temperature 104 °F	ISO 11403-1 -2
	2.69 MPa	390 psi	

Mechanical Properties	Metric	English	TPE; ISO 11403-1 -2 Comments
	@Strain 149.53 %, Temperature 120 °C	@Strain 149.53 %, Temperature 248 °F	
	2.82 MPa	409 psi	
	@Strain 22.95 %, Temperature 100 °C	@Strain 22.95 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	2.86 MPa	415 psi	
	@Strain 172.27 %, Temperature 120 °C	@Strain 172.27 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	2.89 MPa	419 psi	
	@Strain 15.24 %, Temperature 90.0 °C	@Strain 15.24 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	2.90 MPa	421 psi	
	@Strain 6.00 %, Temperature 23.0 °C	@Strain 6.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	2.97 MPa	431 psi	
	@Strain 24.0 %, Temperature 90.0 °C	@Strain 24.0 %, Temperature 194 °F	ISO 11403-1 -2
	2.99 MPa	434 psi	
	@Strain 6.81 %, Temperature 40.0 °C	@Strain 6.81 %, Temperature 104 °F	TPE; ISO 11403-1 -2
	3.06 MPa	444 psi	
	@Strain 201.04 %, Temperature 120 °C	@Strain 201.04 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	3.08 MPa	447 psi	
	@Strain 31.86 %, Temperature 100 °C	@Strain 31.86 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	3.21 MPa	466 psi	
	@Strain 40.77 %, Temperature 100 °C	@Strain 40.77 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	3.22 MPa	467 psi	
	@Strain 42.0 %, Temperature 90.0 °C	@Strain 42.0 %, Temperature 194 °F	ISO 11403-1 -2
	3.30 MPa	479 psi	
	@Strain 51.73 %, Temperature 100 °C	@Strain 51.73 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	3.38 MPa	490 psi	
	@Strain 63.38 %, Temperature 100 °C	@Strain 63.38 %, Temperature 212 °F	TPE; ISO 11403-1 -2

Mechanical Properties	Metric ^{MPa}	English	Comments
	@Strain 23.75 %, Temperature 90.0 °C	@Strain 23.75 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	3.44 MPa	499 psi	
	@Strain 75.03 %, Temperature 100 °C	@Strain 75.03 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	3.52 MPa	511 psi	
	@Strain 86.68 %, Temperature 100 °C	@Strain 86.68 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	3.56 MPa	516 psi	
	@Strain 6.00 %, Temperature 0.000 °C	@Strain 6.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	3.65 MPa	529 psi	
	@Strain 103.81 %, Temperature 100 °C	@Strain 103.81 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	3.66 MPa	531 psi	
	@Strain 32.97 %, Temperature 90.0 °C	@Strain 32.97 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	3.67 MPa	532 psi	
	@Strain 14.98 %, Temperature 60.0 °C	@Strain 14.98 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	3.74 MPa	542 psi	
	@Strain 114.77 %, Temperature 100 °C	@Strain 114.77 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	3.76 MPa	545 psi	
	@Strain 41.48 %, Temperature 90.0 °C	@Strain 41.48 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	3.86 MPa	560 psi	
	@Strain 52.82 %, Temperature 90.0 °C	@Strain 52.82 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	3.87 MPa	561 psi	
	@Strain 129.16 %, Temperature 100 °C	@Strain 129.16 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	3.92 MPa	569 psi	
	@Strain 64.88 %, Temperature 90.0 °C	@Strain 64.88 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	3.98 MPa	577 psi	

Mechanical Properties	@Strain 76.93 %, Metric Temperature 90.0 °C	@Strain 76.93 %, English Temperature 194 °F	TPE; ISO 11403-1 -2 Comments
	4.07 MPa	590 psi	
	@Strain 88.28 %, Temperature 90.0 °C	@Strain 88.28 %, Temperature 194 °F	TPE; ISO 11403-1 -2

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