

DuPont Performance Polymers Hytrel® 5555HS Polyester Elastomer TPC-ET (Unverified Data**)

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

Material Notes:

55 Shore D High Performance Polyester Elastomer with Heat Ageing Protection Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Hytrel-5555HS-Polyester-Elastomer-TPC-ET-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 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	0.70 %	0.70 %	Immersion 24h; ASTM D570
Viscosity	75000 cP @Shear Rate 5000 1/s, Temperature 255 °C	75000 cP @Shear Rate 5000 1/s, Temperature 491 °F	ISO 11403-1 -2
	81000 cP @Shear Rate 5000 1/s, Temperature 235 °C	81000 cP @Shear Rate 5000 1/s, Temperature 455 °F	ISO 11403-1 -2
	86000 cP @Shear Rate 5000 1/s, Temperature 215 °C	86000 cP @Shear Rate 5000 1/s, Temperature 419 °F	ISO 11403-1 -2
	171000 cP @Shear Rate 500 1/s, Temperature 255 °C	171000 cP @Shear Rate 500 1/s, Temperature 491 °F	ISO 11403-1 -2
	217000 cP @Shear Rate 500 1/s, Temperature 235 °C	217000 cP @Shear Rate 500 1/s, Temperature 455 °F	ISO 11403-1 -2
	271000 cP @Shear Rate 500 1/s, Temperature 215 °C	271000 cP @Shear Rate 500 1/s, Temperature 419 °F	ISO 11403-1 -2
Linear Mold Shrinkage, Flow	0.015 cm/cm	0.015 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.015 cm/cm	0.015 in/in	ISO 294-4 2577

Physical Properties	Metric	English	Comments
Melt Flow	@Load 2.16 kg, Temperature 220 °C	@Load 4.76 lb, Temperature 428 °F	cm ³ /10min; ISO 1133
	8.5 g/10 min	8.5 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 220 °C	@Load 4.76 lb, Temperature 428 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	52	52	15s; ISO 868
	<= 55	<= 55	ISO 868
Tensile Strength at Break	35.0 MPa	5080 psi	ISO 527-1/-2
Tensile Stress	6.90 MPa	1000 psi	ISO 527-1/-2
	@Strain 5.00 %	@Strain 5.00 %	
	11.1 MPa	1610 psi	ISO 527-1/-2
	@Strain 10.0 %	@Strain 10.0 %	
	14.7 MPa	2130 psi	ISO 527-1/-2
	@Strain 50.0 %	@Strain 50.0 %	
	16.0 MPa	2320 psi	ISO 527-1/-2
	@Strain 100 %	@Strain 100 %	
	2.81 MPa	408 psi	TPE; ISO 11403-1 -2
	@Strain 4.00 %, Temperature 120 °C	@Strain 4.00 %, Temperature 248 °F	
	3.27 MPa	474 psi	TPE; ISO 11403-1 -2
	@Strain 3.93 %, Temperature 100 °C	@Strain 3.93 %, Temperature 212 °F	
	3.52 MPa	511 psi	TPE; ISO 11403-1 -2
	@Strain 3.88 %, Temperature 90.0 °C	@Strain 3.88 %, Temperature 194 °F	
	4.39 MPa	637 psi	TPE; ISO 11403-1 -2
	@Strain 3.78 %, Temperature 60.0 °C	@Strain 3.78 %, Temperature 140 °F	
	5.46 MPa	792 psi	TPE; ISO 11403-1 -2
	@Strain 13.47 %, Temperature 120 °C	@Strain 13.47 %, Temperature 248 °F	
	5.54 MPa	804 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 3.77 %, Temperature 40.0 °C	@Strain 3.77 %, Temperature 104 °F	TPE; ISO 11403-1 -2
	6.26 MPa	908 psi	
	@Strain 23.66 %, Temperature 120 °C	@Strain 23.66 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	6.54 MPa	949 psi	
	@Strain 33.86 %, Temperature 120 °C	@Strain 33.86 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	6.63 MPa	962 psi	
	@Strain 44.05 %, Temperature 120 °C	@Strain 44.05 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	6.71 MPa	973 psi	
	@Strain 57.16 %, Temperature 120 °C	@Strain 57.16 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	6.79 MPa	985 psi	
	@Strain 13.93 %, Temperature 100 °C	@Strain 13.93 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	6.81 MPa	988 psi	
	@Strain 70.26 %, Temperature 120 °C	@Strain 70.26 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	6.95 MPa	1010 psi	
	@Strain 83.37 %, Temperature 120 °C	@Strain 83.37 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	7.12 MPa	1030 psi	
	@Strain 97.2 %, Temperature 120 °C	@Strain 97.2 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	7.18 MPa	1040 psi	
	@Strain 0.750 %, Temperature -40.0 °C	@Strain 0.750 %, Temperature -40.0 °F	TPE; ISO 11403-1 -2
	7.36 MPa	1070 psi	
	@Strain 13.77 %, Temperature 90.0 °C	@Strain 13.77 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	7.39 MPa	1070 psi	
	@Strain 116.86 %, Temperature 120 °C	@Strain 116.86 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	7.64 MPa	1110 psi	
	@Strain 130.69 %, Temperature 120 °C	@Strain 130.69 %, Temperature 248 °F	TPE; ISO 11403-1 -2

Mechanical Properties	Metric	English	Comments
	@Strain 23.93 %, Temperature 100 °C	@Strain 23.93 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	7.85 MPa	1140 psi	
	@Strain 4.57 %, Temperature 23.0 °C	@Strain 4.57 %, Temperature 73.4 °F	TPE; ISO 11403-1 -2
	7.93 MPa	1150 psi	
	@Strain 3.49 %, Temperature 0.000 °C	@Strain 3.49 %, Temperature 32.0 °F	TPE; ISO 11403-1 -2
	7.99 MPa	1160 psi	
	@Strain 146.71 %, Temperature 120 °C	@Strain 146.71 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	8.11 MPa	1180 psi	
	@Strain 34.64 %, Temperature 100 °C	@Strain 34.64 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.21 MPa	1190 psi	
	@Strain 44.65 %, Temperature 100 °C	@Strain 44.65 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.32 MPa	1210 psi	
	@Strain 58.22 %, Temperature 100 °C	@Strain 58.22 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.45 MPa	1230 psi	
	@Strain 23.65 %, Temperature 90.0 °C	@Strain 23.65 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	8.47 MPa	1230 psi	
	@Strain 71.79 %, Temperature 100 °C	@Strain 71.79 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.61 MPa	1250 psi	
	@Strain 170.01 %, Temperature 120 °C	@Strain 170.01 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	8.64 MPa	1250 psi	
	@Strain 85.36 %, Temperature 100 °C	@Strain 85.36 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.81 MPa	1280 psi	
	@Strain 33.53 %, Temperature 90.0 °C	@Strain 33.53 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	8.83 MPa	1280 psi	
			TPE; ISO 11403-1 -2

Mechanical Properties	Metric @Strain 98.93 %, Temperature 100 °C	English @Strain 98.93 %, Temperature 212 °F	Comments
	8.93 MPa	1300 psi	
	@Strain 43.42 %, Temperature 90.0 °C	@Strain 43.42 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	9.04 MPa	1310 psi	
	@Strain 56.83 %, Temperature 90.0 °C	@Strain 56.83 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	9.18 MPa	1330 psi	
	@Strain 119.65 %, Temperature 100 °C	@Strain 119.65 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	9.19 MPa	1330 psi	
	@Strain 70.25 %, Temperature 90.0 °C	@Strain 70.25 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	9.37 MPa	1360 psi	
	@Strain 83.66 %, Temperature 90.0 °C	@Strain 83.66 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	9.40 MPa	1360 psi	
	@Strain 196.95 %, Temperature 120 °C	@Strain 196.95 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	9.45 MPa	1370 psi	
	@Strain 133.22 %, Temperature 100 °C	@Strain 133.22 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	9.53 MPa	1380 psi	
	@Strain 14.11 %, Temperature 60.0 °C	@Strain 14.11 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	9.58 MPa	1390 psi	
	@Strain 97.07 %, Temperature 90.0 °C	@Strain 97.07 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	9.86 MPa	1430 psi	
	@Strain 149.65 %, Temperature 100 °C	@Strain 149.65 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	9.92 MPa	1440 psi	
	@Strain 116.84 %, Temperature 90.0 °C	@Strain 116.84 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	10.21 MPa	1481 psi	
	@Strain 130.25 %, Temperature 90.0 °C	@Strain 130.25 %, Temperature 194 °F	TPE; ISO 11403-1 -2

Mechanical Properties	10.53 MPa Metric	1527 psi English	Comments
	@Strain 173.94 %, Temperature 100 °C	@Strain 173.94 %, Temperature 212 °F	TPU, ISO 11403-1 -2

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