

DuPont Performance Polymers Hytrel® 5553FG NC010 Polyester Elastomer TPC-ET (Unverified Data**)

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

Material Notes:

55 Shore D High Performance Polyester Elastomer Developed for Food Contact Applications Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Hytrel-5553FG-NC010-Polyester-Elastomer-TPC-ET-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.03 g/cc	0.0372 lb/in ³	DS
	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Water Absorption	0.60 %	0.60 %	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
Linear Mold Shrinkage, Flow	0.014 cm/cm	0.014 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.014 cm/cm	0.014 in/in	ISO 294-4 2577
Melt Flow	7.0 g/10 min	7.0 g/10 min	cm ³ /10min; ISO 1133
	@Load 2.16 kg, Temperature 220 °C	@Load 4.76 lb, Temperature 428 °F	
	8.0 g/10 min	8.0 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	51	51	15s; ISO 868
	<= 56	<= 56	ISO 868
Tensile Strength at Break	40.0 MPa	5800 psi	ISO 527-1/-2
Tensile Stress	6.60 MPa	957 psi	ISO 527-1/-2
	@Strain 5.00 %	@Strain 5.00 %	
	10.2 MPa	1480 psi	

Mechanical Properties	Metric @Strain 10.0 %	English @Strain 10.0 %	ISO 527-1/-2 Comments
	15.0 MPa	2180 psi	ISO 527-1/-2
	@Strain 100 %	@Strain 100 %	
	3.97 MPa	576 psi	TPE; ISO 11403-1 -2
	@Strain 6.94 %, Temperature 120 °C	@Strain 6.94 %, Temperature 248 °F	
	4.65 MPa	674 psi	TPE; ISO 11403-1 -2
	@Strain 6.90 %, Temperature 100 °C	@Strain 6.90 %, Temperature 212 °F	
	4.93 MPa	715 psi	ISO 11403-1 -2
	@Strain 6.00 %, Temperature 90.0 °C	@Strain 6.00 %, Temperature 194 °F	
	4.97 MPa	721 psi	TPE; ISO 11403-1 -2
	@Strain 6.87 %, Temperature 90.0 °C	@Strain 6.87 %, Temperature 194 °F	
	5.78 MPa	838 psi	TPE; ISO 11403-1 -2
	@Strain 16.44 %, Temperature 120 °C	@Strain 16.44 %, Temperature 248 °F	
	6.37 MPa	924 psi	TPE; ISO 11403-1 -2
	@Strain 26.67 %, Temperature 120 °C	@Strain 26.67 %, Temperature 248 °F	
	6.55 MPa	950 psi	TPE; ISO 11403-1 -2
	@Strain 36.16 %, Temperature 120 °C	@Strain 36.16 %, Temperature 248 °F	
	6.62 MPa	960 psi	TPE; ISO 11403-1 -2
	@Strain 46.39 %, Temperature 120 °C	@Strain 46.39 %, Temperature 248 °F	
	6.70 MPa	972 psi	TPE; ISO 11403-1 -2
	@Strain 58.81 %, Temperature 120 °C	@Strain 58.81 %, Temperature 248 °F	
	6.83 MPa	991 psi	TPE; ISO 11403-1 -2
	@Strain 71.96 %, Temperature 120 °C	@Strain 71.96 %, Temperature 248 °F	
	6.84 MPa	992 psi	TPE; ISO 11403-1 -2
	@Strain 7.55 %, Temperature 60.0 °C	@Strain 7.55 %, Temperature 140 °F	
	6.97 MPa	1010 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 85.11 %, Temperature 120 °C	@Strain 85.11 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	6.98 MPa	1010 psi	
	@Strain 17.06 %, Temperature 100 °C	@Strain 17.06 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	7.12 MPa	1030 psi	
	@Strain 98.26 %, Temperature 120 °C	@Strain 98.26 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	7.41 MPa	1070 psi	
	@Strain 117.99 %, Temperature 120 °C	@Strain 117.99 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	7.46 MPa	1080 psi	
	@Strain 6.00 %, Temperature 40.0 °C	@Strain 6.00 %, Temperature 104 °F	ISO 11403-1 -2
	7.51 MPa	1090 psi	
	@Strain 16.99 %, Temperature 90.0 °C	@Strain 16.99 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	7.67 MPa	1110 psi	
	@Strain 27.23 %, Temperature 100 °C	@Strain 27.23 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	7.67 MPa	1110 psi	
	@Strain 131.14 %, Temperature 120 °C	@Strain 131.14 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	7.88 MPa	1140 psi	
	@Strain 37.39 %, Temperature 100 °C	@Strain 37.39 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	7.90 MPa	1150 psi	
	@Strain 6.00 %, Temperature 23.0 °C	@Strain 6.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	7.96 MPa	1150 psi	
	@Strain 46.83 %, Temperature 100 °C	@Strain 46.83 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.04 MPa	1170 psi	
	@Strain 60.62 %, Temperature 100 °C	@Strain 60.62 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.07 MPa	1170 psi	
	@Strain 147.21 %, Temperature 120 °C	@Strain 147.21 %, Temperature 248 °F	TPE; ISO 11403-1 -2

Mechanical Properties	Metric	English	Comments
	@Strain 73.69 %, Temperature 100 °C	@Strain 73.69 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.30 MPa	1200 psi	
	@Strain 27.11 %, Temperature 90.0 °C	@Strain 27.11 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	8.32 MPa	1210 psi	
	@Strain 86.76 %, Temperature 100 °C	@Strain 86.76 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.52 MPa	1240 psi	
	@Strain 100.56 %, Temperature 100 °C	@Strain 100.56 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.52 MPa	1240 psi	
	@Strain 24.0 %, Temperature 90.0 °C	@Strain 24.0 %, Temperature 194 °F	ISO 11403-1 -2
	8.56 MPa	1240 psi	
	@Strain 37.24 %, Temperature 90.0 °C	@Strain 37.24 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	8.65 MPa	1250 psi	
	@Strain 47.36 %, Temperature 90.0 °C	@Strain 47.36 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	8.67 MPa	1260 psi	
	@Strain 7.52 %, Temperature 40.0 °C	@Strain 7.52 %, Temperature 104 °F	TPE; ISO 11403-1 -2
	8.76 MPa	1270 psi	
	@Strain 170.59 %, Temperature 120 °C	@Strain 170.59 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	8.78 MPa	1270 psi	
	@Strain 60.37 %, Temperature 90.0 °C	@Strain 60.37 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	8.85 MPa	1280 psi	
	@Strain 120.16 %, Temperature 100 °C	@Strain 120.16 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	8.94 MPa	1300 psi	
	@Strain 73.39 %, Temperature 90.0 °C	@Strain 73.39 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	9.14 MPa	1330 psi	
			TPE; ISO 11403-1 -2

Mechanical Properties	Metric @Strain 87.12 %, Temperature 90.0 °C	English @Strain 87.12 %, Temperature 194 °F	Comments
	9.17 MPa	1330 psi	
	@Strain 133.96 %, Temperature 100 °C	@Strain 133.96 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	9.33 MPa	1350 psi	
	@Strain 100.14 %, Temperature 90.0 °C	@Strain 100.14 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	9.60 MPa	1390 psi	
	@Strain 196.16 %, Temperature 120 °C	@Strain 196.16 %, Temperature 248 °F	TPE; ISO 11403-1 -2
	9.61 MPa	1390 psi	
	@Strain 150.65 %, Temperature 100 °C	@Strain 150.65 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	9.71 MPa	1410 psi	
	@Strain 120.38 %, Temperature 90.0 °C	@Strain 120.38 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	9.82 MPa	1420 psi	
	@Strain 17.63 %, Temperature 60.0 °C	@Strain 17.63 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	10.01 MPa	1452 psi	
	@Strain 133.4 %, Temperature 90.0 °C	@Strain 133.4 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	10.32 MPa	1497 psi	
	@Strain 173.89 %, Temperature 100 °C	@Strain 173.89 %, Temperature 212 °F	TPE; ISO 11403-1 -2
	10.4 MPa	1510 psi	
	@Strain 6.00 %, Temperature 0.000 °C	@Strain 6.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	10.45 MPa	1516 psi	
	@Strain 150.03 %, Temperature 90.0 °C	@Strain 150.03 %, Temperature 194 °F	TPE; ISO 11403-1 -2
	10.71 MPa	1553 psi	
	@Strain 28.42 %, Temperature 60.0 °C	@Strain 28.42 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	10.92 MPa	1584 psi	
	@Strain 38.49 %, Temperature 60.0 °C	@Strain 38.49 %, Temperature 140 °F	TPE; ISO 11403-1 -2
	10.98 MPa	1593 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 48.56 %, Temperature 60.0 °C	@Strain 48.56 %, Temperature 140 °F	403-1 -2
	11.12 MPa	1613 psi	
	@Strain 62.95 %, Temperature 60.0 °C	@Strain 62.95 %, Temperature 140 °F	TPE; ISO 11403-1 -2

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