

Toyobo Pelprene™ P-280B Polyester TPE

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyester, TP , Polyether Ester Elastomer

Material Notes:

Key Feature: Pelprene P type Pelprene™ can be processed into a wide variety of articles from ultra-small precision parts to sheets by injection, extrusion, and blow molding. The 'P' type is a block copolymer consisting of an aromatic polyester as the hard segment and an aliphatic polyether as the soft one. It covers general purpose grades, being designed to have a balance of flexibility, heat & cold resistance, chemical resistance, and processability. Information provided by Toyobo Co., Ltd

Order this product through the following link:

http://www.lookpolymers.com/polymer_Toyobo-Pelprene-P-280B-Polyester-TPE.php

Physical Properties	Metric	English	Comments
Density	1.26 g/cc	0.0455 lb/in ³	ASTM D792
Moisture Absorption at Equilibrium	0.30 %	0.30 %	25°C; 65%RH
Linear Mold Shrinkage	0.016 cm/cm @Thickness 2.00 mm	0.016 in/in @Thickness 0.0787 in	
Melt Flow	13 g/10 min @Temperature 230 °C	13 g/10 min @Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	99	99	ASTM D2240
Hardness, Shore D	68	68	ASTM D2240
Tensile Strength, Ultimate	21.0 MPa	3050 psi	ASTM D638
Elongation at Break	500 %	500 %	ASTM D638
50% Modulus	0.0285 GPa	4.13 ksi	ASMT D638
Flexural Modulus	0.495 GPa	71.8 ksi	ASTM D790
Compressive Modulus	0.0350 GPa	5.08 ksi	10% Compression Modulus; ASTM D695
Resilience	55	55	JIS K6301
Izod Impact, Notched	1.50 J/cm	2.81 ft-lb/in	ASTM D256
Tear Strength	206 kN/m	1180 pli	ASTM D624
Taber Abrasion, mg/1000 Cycles	8.0	8.0	CS-17 wheel; ASTM D1044

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric $^{\circ}\text{C}$	English $^{\circ}\text{F}$	Comments
CTE, linear	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	TMA
Melting Point	218 $^{\circ}\text{C}$	424 $^{\circ}\text{F}$	DSC
Deflection Temperature at 1.8 MPa (264 psi)	155 $^{\circ}\text{C}$	311 $^{\circ}\text{F}$	ASTM D648
Vicat Softening Point	199 $^{\circ}\text{C}$	390 $^{\circ}\text{F}$	ASTM D1525
Brittleness Temperature	-60.0 $^{\circ}\text{C}$	-76.0 $^{\circ}\text{F}$	JIS K6301
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	5.00e+14 ohm-cm	5.00e+14 ohm-cm	ASTM D257
Dielectric Strength	30.0 kV/mm	762 kV/in	JIS K2111

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