

Toyobo Pelprene™ S-6001 Polyester TPE

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

Material Notes:

Key Feature: Pelprene S 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 'S' type is a block copolymer consisting of an aromatic polyester as the hard segment and an aliphatic polyester as the soft one. It has physical properties similar to the 'P' type and excellent heat aging and weather resistance. Information provided by Toyobo Co., Ltd

Order this product through the following link:

http://www.lookpolymers.com/polymer_Toyobo-Pelprene-S-6001-Polyester-TPE.php

Physical Properties	Metric	English	Comments
Density	1.28 g/cc	0.0462 lb/in ³	ASTM D792
Moisture Absorption at Equilibrium	0.30 %	0.30 %	25°C; 65%RH
Linear Mold Shrinkage	0.017 cm/cm @Thickness 2.00 mm	0.017 in/in @Thickness 0.0787 in	
Melt Flow	12 g/10 min @Temperature 230 °C	12 g/10 min @Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	99	99	ASTM D2240
Hardness, Shore D	72	72	ASTM D2240
Tensile Strength, Ultimate	44.0 MPa	6380 psi	ASTM D638
Elongation at Break	490 %	490 %	ASTM D638
50% Modulus	0.0275 GPa	3.99 ksi	ASMT D638
Flexural Modulus	0.570 GPa	82.7 ksi	ASTM D790
Compressive Modulus	0.0310 GPa	4.50 ksi	10% Compression Modulus; ASTM D695
Resilience	56	56	JIS K6301
Izod Impact, Notched	2.70 J/cm	5.06 ft-lb/in	ASTM D256
Tear Strength	196 kN/m	1120 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 $^{\circ}\text{m}^{-1}\text{C}^{-1}$	English $^{\circ}\text{in}^{-1}\text{F}^{-1}$	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)	130 $^{\circ}\text{C}$	266 $^{\circ}\text{F}$	ASTM D648
Vicat Softening Point	202 $^{\circ}\text{C}$	396 $^{\circ}\text{F}$	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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