

PELPRENE™ P46D-01

Thermoplastic Polyester Elastomer

TOYOBO America, Inc.

Message:

PELPRENE™P46D-01 is a thermoplastic polyester elastomer (TPEE) product. It is available in North America.

Features include:

flame retardant/rated flame

high viscosity

Wear-resistant

General Information			
Features	Durability Viscosity, High		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.50	g/10 min	ASTM D1238
Molding Shrinkage - Flow (2.00 mm)	0.70	%	ASTM D955
Water Absorption (Equilibrium, 23°C, 65% RH)	0.45	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	46		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	31.9	MPa	ASTM D638
Tensile Elongation (Break)	700	%	ASTM D638
Flexural Modulus	110	MPa	ASTM D790
Compressive Modulus	9.60	MPa	ASTM D695
Taber Abrasion Resistance (1000 Cycles)	10.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tear Strength	165	kN/m	ASTM D624
Compression Set	55	%	ASTM D395
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	No Break		ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	74.0	°C	ASTM D648
Brittleness Temperature	-65.0	°C	ASTM D746
Vicat Softening Temperature	153	°C	ASTM D1525
Melting Temperature	203	°C	DSC
CLTE - Flow	1.7E-4	cm/cm/°C	ASTM D696

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	4.0E+13	ohms·cm	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94

Additional Information

Hardness, JIS K6301, A scale: 97 Resilience, JIS K6301: 70 % Dielectric Strength, JIS K2111: 25 MV/m The value listed as Compression Set, ASTM D395 was tested according to the JIS K6301 standard. The value listed as Brittle Point, ASTM D746 was tested according to the JIS K6301 standard. Coefficient of Linear Thermal Expansion, TMA: $17 \times 10^{-5} / K$ Compression Modulus, ASTM D695, 10%: 9.6 MPa Tensile Modulus, ASTM D638, 50% Modulus: 15.2 MPa The value listed as Brittle Temp ASTM D746, was tested in accordance with JIS K6301.

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