Premix Thermoplastics PRE-ELEC® PPE 1461 (discontinued **)

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO

Material Notes:

PRE-ELEC PPE 1461 is a conductive thermoplastic compound based on modified polyphenylene ether (PPE). Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity PRE-ELEC PPE 1461 has excellent mechanical properties and is easy to extrude and vacuum form. The chemical purity of PRE-ELEC PPE 1461 is excellent.Typical applications include extruded sheets for microchip carrier tapes and vacuum formed trays for electronic components and other static sensitive devices (SSD).Information provided by Premix Thermoplastics Inc.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Premix-Thermoplastics-PRE-ELEC-PPE-1461-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/in³	
Linear Mold Shrinkage	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	4 mm thick, 10.0 mm wide molded rod; ISO 294-4
Melt Flow	2.0 g/10 min @Load 5.00 kg, Temperature 240 °C	2.0 g/10 min @Load 11.0 lb, Temperature 464 °F	ISO 1133
High Load Melt Index	10 g/10 min @Load 21.6 kg, Temperature 240 °C	10 g/10 min @Load 47.6 lb, Temperature 464 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	4.0 mm thick;10.0 mm wide molded rod; ISO 868
Film Tensile Strength at Yield, MD	40.0 MPa	5800 psi	ISO 527
Film Tensile Strength at Yield, TD	36.0 MPa	5220 psi	ISO 527
Film Elongation at Break, MD	40 %	40 %	ISO 527
Film Elongation at Break, TD	35 %	35 %	ISO 527
Film Elongation at Yield, MD	4.0 %	4.0 %	ISO 527
Film Elongation at Yield, TD	4.0 %	4.0 %	ISO 527
Modulus of Elasticity	2.50 GPa	363 ksi	4 mm thick;10.0 mm wide molded rod; ISO 178
Izod Impact, Notched	0.320 J/cm @Thickness 4.00 mm, Temperature -20.0 °C	0.599 ft-lb/in @Thickness 0.157 in, Temperature -4.00 °F	ISO 180

Mechanical Properties	Metric	English	Comments
	0.750 J/cm @Thickness 4.00 mm, Temperature 23.0 °C	1.41 ft-lb/in @Thickness 0.157 in, Temperature 73.4 °F	ISO 180
Izod Impact, Unnotched	5.00 J/cm @Thickness 4.00 mm, Temperature -20.0 °C	9.37 ft-lb/in @Thickness 0.157 in, Temperature -4.00 °F	ISO 180
	5.00 J/cm @Thickness 4.00 mm, Temperature 23.0 °C	9.37 ft-lb/in @Thickness 0.157 in, Temperature 73.4 °F	ISO 180
Film Tensile Strength at Break, MD	37.0 MPa	5370 psi	ISO 527
Film Tensile Strength at Break, TD	34.0 MPa	4930 psi	ISO 527

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	93.0 °C	199 °F	4 mm thick;10.0 mm wide molded rod; ISO 75/Method Bf
Deflection Temperature at 1.8 MPa (264 psi)	76.0 °C	169 °F	4 mm thick;10.0 mm wide molded rod; ISO 75/Method Af
Vicat Softening Point	108 °C	226 °F	Rate B; 4 mm thick;10.0 mm wide molded rod; ISO 306/B50
	114 °C	237 °F	Rate A; 4 mm thick;10.0 mm wide molded rod; ISO 306/A50

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 1000 ohm-cm	<= 1000 ohm-cm	400 um thick sheet; ISO D-257
Surface Resistance	<= 10000 ohm	<= 10000 ohm	400 um thick sheet; ISO D-257

Processing Properties	Metric	English	Comments
Middle Barrel Temperature	250 °C	482 °F	Zone 2; Cylinder
	250 °C	482 °F	Zone 1; Cylinder
	260 °C	500 °F	Zone 3; Cylinder
	260 °C	500 °F	Zone 4; Cylinder
	265 °C	509 °F	Zone 5; Cylinder
	265 °C	509 °F	Zone 6; Cylinder
Die Temperature	240 °C	464 °F	Zone 3
	260 °C	500 °F	Zone 1

Processing Properties	Metric	English	Comments
	260 °C	500 °F	Zone 5
	260 °C	500 °F	Zone 2
Roll Temperature	60.0 °C	140 °F	3rd Roll
	80.0 °C	176 °F	2nd Roll
	90.0 °C	194 °F	1st Roll
Drying Temperature	100 - 110 °C @Time 7200 - 14400 sec	212 - 230 °F @Time 2.00 - 4.00 hour	Pre-drying
Moisture Content	<= 0.15 %	<= 0.15 %	When Produced
Shelf Life	12.0 Month	12.0 Month	Normal Storing Conditions

Descriptive Properties	Value	Comments
Appearance	Granule	
Bending Strength, cycles, min	30	ISO 5626; Trans-Machine Direction; 400 um thick sheet
	400	ISO 5626; Machine Direction; 400 um thick sheet
Color	Black	

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