

Premix Thermoplastics PRE-ELEC® PC/ABS 1420

Category : Polymer , Film , Thermoplastic , ABS Polymer , Polycarbonate (PC)

Material Notes:

PRE-ELEC PC/ABS 1420 is a conductive thermoplastic compound based on a PC/ABS blend. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity PRE-ELEC PC/ABS 1420 has excellent mechanical properties and is easy to extrude. Typical applications include extruded sheets for thermoforming of trays for the electronics industry when good rigidity is needed. Information provided by Premix Thermoplastics Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Premix-Thermoplastics-PRE-ELEC-PCABS-1420.php

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in ³	
Thickness	406 microns	16.0 mil	
Linear Mold Shrinkage	0.0070 - 0.0090 cm/cm	0.0070 - 0.0090 in/in	4 mm thick, 10.0 mm wide molded rod; ISO 294-4
Melt Flow	0.50 g/10 min	0.50 g/10 min	ISO 1133
	@Load 5.00 kg, Temperature 240 °C	@Load 11.0 lb, Temperature 464 °F	
High Load Melt Index	1.0 g/10 min	1.0 g/10 min	ISO 1133
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	
High Load Melt Index	18 g/10 min	18 g/10 min	ISO 1133
	@Load 21.6 kg, Temperature 240 °C	@Load 47.6 lb, Temperature 464 °F	

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	37.0 MPa	5370 psi	ISO 527
Film Elongation at Break, MD	20 %	20 %	ISO 527
Film Elongation at Yield, MD	5.0 %	5.0 %	ISO 527
Modulus of Elasticity	2.70 GPa	392 ksi	4 mm thick; 10.0 mm wide molded rod; ISO 178
Izod Impact, Notched	0.300 J/cm	0.562 ft-lb/in	ISO 180
	@Thickness 4.00 mm, Temperature -20.0 °C	@Thickness 0.157 in, Temperature -4.00 °F	
Izod Impact, Notched	2.30 J/cm	4.31 ft-lb/in	ISO 180
	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	

Mechanical Properties	Metric 2.70 J/cm	English 5.14 ft-lb/in	Comments
Izod Impact, Unnotched	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	ISO 180
	5.00 J/cm	9.37 ft-lb/in	
	@Thickness 4.00 mm, Temperature -20.0 °C	@Thickness 0.157 in, Temperature -4.00 °F	ISO 180
Film Tensile Strength at Break, MD	35.0 MPa	5080 psi	ISO 527

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	111 °C	232 °F	4 mm thick;10.0 mm wide molded rod; ISO 75/Method Bf
Deflection Temperature at 1.8 MPa (264 psi)	97.0 °C	207 °F	4 mm thick;10.0 mm wide molded rod; ISO 75/Method Af
Vicat Softening Point	118 °C	244 °F	Rate B; 4 mm thick;10.0 mm wide molded rod; ISO 306/B50
	138 °C	280 °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	<= 1e+05	<= 1e+05	400 um thick sheet; ISO D-257

Processing Properties	Metric	English	Comments
Middle Barrel Temperature	280 °C	536 °F	Zone 1; Cylinder
	290 °C	554 °F	Zone 2; Cylinder
	290 °C	554 °F	Zone 3; Cylinder
	290 °C	554 °F	Zone 4; Cylinder
	300 °C	572 °F	Zone 5; Cylinder
	300 °C	572 °F	Zone 6; Cylinder
Die Temperature	290 °C	554 °F	Zone 3
	300 °C	572 °F	Zone 1
	300 °C	572 °F	Zone 4
	300 °C	572 °F	Zone 5
	300 °C	572 °F	Zone 2

Processing Properties	Metric	English	Comments
	80.0 °C	176 °F	2nd Roll
	90.0 °C	194 °F	1st Roll
Drying Temperature	120 °C @Time 10800 - 14400 sec	248 °F @Time 3.00 - 4.00 hour	Pre-drying in a dehumidifier
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	
Color	Black	

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