

Premix Thermoplastics PRE-ELEC® PP 1399 Dissipative Thermoplastic Compound

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene with Carbon Black Filler

Material Notes:

PRE-ELEC® PP 1399 is a dissipative thermoplastic compound based on polypropylene. The electrical dissipation is achieved by using special conductive carbon black. In addition to stable surface resistance between 10⁴-10⁷ ohms PRE-ELEC® PP 1399 has an excellent balance of mechanical properties and is easy to injection mould. Applications: Injection moulded crates, boxes, pallets and tote bins for electronic, automotive and chemical industry to prevent static charges. Processing: PRE-ELEC® PP 1399 compound can be processed in the injection moulding machines using normal processing conditions as with polypropylene. Test Specimen: 10[mm] wide moulded rod

Information from Premix OY

Order this product through the following link:

http://www.lookpolymers.com/polymer_Premix-Thermoplastics-PRE-ELEC-PP-1399-Dissipative-Thermoplastic-Compound.php

Physical Properties	Metric	English	Comments
Density	0.980 g/cc	0.0354 lb/in ³	
Thickness	102 microns	4.00 mil	
Linear Mold Shrinkage	0.012 - 0.018 cm/cm	0.012 - 0.018 in/in	ISO 294-4
Melt Flow	4.0 g/10 min	4.0 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 230 °C	@Load 4.76 lb, Temperature 446 °F	
	20 g/10 min	20 g/10 min	ISO 1133
	@Load 5.00 kg, Temperature 230 °C	@Load 11.0 lb, Temperature 446 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	96	96	ISO 868
Hardness, Shore D	71	71	ISO 868
Tensile Strength	18.0 MPa	2610 psi	ISO 527
Tensile Strength, Yield	26.0 MPa	3770 psi	ISO 527
Elongation at Break	30 %	30 %	ISO 527
Elongation at Yield	10 %	10 %	ISO 527
Flexural Modulus	1.40 GPa	203 ksi	ISO 178
Izod Impact, Notched (ISO)	3.00 kJ/m ²	1.43 ft-lb/in ²	ISO 180
	@Thickness 4.00 mm,	@Thickness 0.157 in,	

Mechanical Properties	Temperature -20.0 °C Metric	Temperature -4.00 °F English	Comments
	NB	NB	
	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	ISO 180
Izod Impact, Unnotched (ISO)	NB	NB	
	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	ISO 180
	NB	NB	
	@Thickness 4.00 mm, Temperature -20.0 °C	@Thickness 0.157 in, Temperature -4.00 °F	ISO 180
Charpy Impact Unnotched	NB	NB	
	@Thickness 102 mm, Temperature 23.0 °C	@Thickness 4.00 in, Temperature 73.4 °F	ISO 179
	NB	NB	
	@Thickness 102 mm, Temperature -20.0 °C	@Thickness 4.00 in, Temperature -4.00 °F	ISO 179
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	
	@Thickness 102 mm, Temperature -20.0 °C	@Thickness 4.00 in, Temperature -4.00 °F	ISO 179
	4.00 J/cm ²	19.0 ft-lb/in ²	
	@Thickness 102 mm, Temperature 23.0 °C	@Thickness 4.00 in, Temperature 73.4 °F	ISO 179

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	83.0 °C	181 °F	75/Method Bf
Deflection Temperature at 1.8 MPa (264 psi)	54.0 °C	129 °F	75/Method Af
Vicat Softening Point	150 °C	302 °F	ISO 306/A50

Electrical Properties	Metric	English	Comments
Volume Resistivity	1000 - 1.00e+7 ohm-cm	1000 - 1.00e+7 ohm-cm	ISO D-257
Surface Resistance	10000 - 1.00e+7 ohm	10000 - 1.00e+7 ohm	ISO IEC 61340-5-1

Processing Properties	Metric	English	Comments
Melt Temperature	200 - 260 °C	392 - 500 °F	
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	

Processing Properties	Metric	English	Comments
Drying Temperature	60.0 - 80.0 °C	140 - 176 °F	Pre-drying
Dry Time	2 - 4 hour	2 - 4 hour	
Injection Pressure	60.0 - 80.0 MPa	8700 - 11600 psi	
Shelf Life	12.0 Month	12.0 Month	Normal Storing Conditions

Descriptive Properties	Value	Comments
Injection Speed	Moderate	

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