

Premix Thermoplastics PRE-ELEC® PA 1411 Conductive Thermoplastic Compound

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

PRE-ELEC® PA 1411 is a conductive thermoplastic compound based on polyamide 6. Conductivity is achieved by using conductive carbon black. PRE-ELEC® PA 1411 has a very low electrical resistivity. PRE-ELEC® 1411 is meant to be used as masterbatch and blended with PA 6. Applications: Injection moulded housings, boxes and technical parts. PRE-ELEC® PA 1411 is well suited for applications where the good mechanical properties of polyamide are required. Processing: PRE-ELEC® PA 1411 compound can be processed in the injection moulding machines using normal processing conditions as with polyamide. Test Specimen: 10[mm] wide moulded rod. Values below also apply to PRE-ELEC® PA 1411 blended with 30% of unreinforced basic PA 6. Information from Premix OY

Order this product through the following link:

http://www.lookpolymers.com/polymer_Premix-Thermoplastics-PRE-ELEC-PA-1411-Conductive-Thermoplastic-Compound.php

Physical Properties	Metric	English	Comments
Density	1.25 g/cc	0.0452 lb/in ³	
Thickness	102 microns	4.00 mil	
Linear Mold Shrinkage	0.012 - 0.022 cm/cm	0.012 - 0.022 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	72	72	ISO 868
Tensile Strength	68.0 MPa	9860 psi	ISO 527
Tensile Strength, Yield	70.0 MPa	10200 psi	ISO 527
Elongation at Break	12 %	12 %	ISO 527
Elongation at Yield	8.0 %	8.0 %	ISO 527
Flexural Modulus	3.10 GPa	450 ksi	ISO 178
Izod Impact, Notched (ISO)	5.00 kJ/m ²	2.38 ft-lb/in ²	ISO 180
	@Thickness 4.00 mm, Temperature -20.0 °C	@Thickness 0.157 in, Temperature -4.00 °F	
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	ISO 180
	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	ISO 180
	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	

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

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	104 °C	219 °F	75/Method Bf
Deflection Temperature at 1.8 MPa (264 psi)	59.0 °C	138 °F	75/Method Af
Vicat Softening Point	188 °C	370 °F	ISO 306/B50
	218 °C	424 °F	ISO 306/A50

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 50 ohm-cm	<= 50 ohm-cm	ISO D-257
Surface Resistance	<= 10000 ohm	<= 10000 ohm	ISO IEC 61340-5-1

Processing Properties	Metric	English	Comments
Melt Temperature	240 - 300 °C	464 - 572 °F	
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	
Drying Temperature	80.0 °C	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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