Premix Thermoplastics PRE-ELEC® PA 1409 Conductive Thermoplastic Compound

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

PRE-ELEC® PA 1409 is a conductive thermoplastic compound based on polyamide 6. Conductivity is achieved by using conductive carbon black. In addition to a low electrical resistivity PRE-ELEC® PA 1409 has an excellent balance of mechanical properties and is easy to injection mould.Applications: Injection moulded housings, boxes and technical parts. PRE-ELEC® PA 1409 is well suited for applications where the good mechanical properties of polyamide are required. Processing: PRE-ELEC® PA 1409 compound can be processed in the injection moulding machines using normal processing conditions as with polyamide.Test Specimen: 10[mm] wide moulded rodInformation from Premix OY

Order this product through the following link:
http://www.lookpolymers.com/polymer_Premix-Thermoplastics-PRE-ELEC-PA-1409-Conductive-Thermoplastic-Compound.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in³	
Thickness	102 microns	4.00 mil	
Linear Mold Shrinkage	0.016 - 0.022 cm/cm	0.016 - 0.022 in/in	ISO 294-4
Melt Flow	8.5 g/10 min @Load 5.00 kg, Temperature 275 °C	8.5 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133
	43 g/10 min @Load 10.0 kg, Temperature 275 °C	43 g/10 min @Load 22.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	ISO 868
Tensile Strength	58.0 MPa	8410 psi	ISO 527
Tensile Strength, Yield	59.0 MPa	8560 psi	ISO 527
Elongation at Break	29 %	29 %	ISO 527
Elongation at Yield	8.0 %	8.0 %	ISO 527
Flexural Modulus	2.90 GPa	421 ksi	ISO 178
Izod Impact, Notched (ISO)	4.00 kJ/m² @Thickness 4.00 mm, Temperature -20.0 °C	1.90 ft-lb/in² @Thickness 0.157 in, Temperature -4.00 °F	ISO 180

Mechanical Properties	Metric	English	Comments
	11.0 kJ/m² @Thickness 4.00 mm, Temperature 23.0 °C	5.23 ft-lb/in² @Thickness 0.157 in, Temperature 73.4 °F	ISO 180
Izod Impact, Unnotched (ISO)	51.0 kJ/m² @Thickness 4.00 mm, Temperature -20.0 °C	24.3 ft-lb/in² @Thickness 0.157 in, Temperature -4.00 °F	ISO 180
	NB @Thickness 4.00 mm, Temperature 23.0 °C	NB @Thickness 0.157 in, Temperature 73.4 °F	ISO 180
Charpy Impact Unnotched	NB @Thickness 102 mm, Temperature 23.0 °C	NB @Thickness 4.00 in, Temperature 73.4 °F	ISO 179
	NB @Thickness 102 mm, Temperature -20.0 °C	NB @Thickness 4.00 in, Temperature -4.00 °F	ISO 179
Charpy Impact, Notched	0.700 J/cm² @Thickness 102 mm, Temperature -20.0 °C	3.33 ft-lb/in² @Thickness 4.00 in, Temperature -4.00 °F	ISO 179
	1.00 J/cm² @Thickness 102 mm, Temperature 23.0 °C	4.76 ft-lb/in² @Thickness 4.00 in, Temperature 73.4 °F	ISO 179

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	168 °C	334 °F	75/Method Bf
Deflection Temperature at 1.8 MPa (264 psi)	70.0 °C	158 °F	75/Method Af
Vicat Softening Point	190 °C	374 °F	ISO 306/B50
	218 °C	424 °F	ISO 306/A50

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 1000 ohm-cm	<= 1000 ohm-cm	ISO D-257
Surface Resistance	<= 1e+05	<= 1e+05	ISO IEC 61340-5-1

Processing Properties	Metric	English	Comments
Melt Temperature	220 - 280 °C	428 - 536 °F	
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	

Processing Properties	Metric	English	Comments
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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