

Premix Thermoplastics PRE-ELEC® ESD 5300 Static Dissipative Thermoplastic Compound

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene, Molded

Material Notes:

PRE-ELEC® ESD 5300 is a static dissipative thermoplastic compound based on polypropylene homopolymer. The dissipative property is permanent and built into the polymer chain. Surface resistance values of 10⁹ Ω (EOS/ESD S11.11-1993, IEC 61340-5-1) can be achieved. The products made out of PRE-ELEC® ESD 5300 are washable, reusable and recyclable. PRE-ELEC® ESD 5300 is designed for injection molding of transparent parts. In addition, PRE-ELEC® ESD 5300 can be used in clean applications with extremely low amount of extractable ions. The melt flow properties of PRE-ELEC® ESD 5300 are tailored to fit the requirements of injection molding. Applications: Bins and other injection molded parts, where permanent ESD protection and high cleanliness are required. These products can be used mainly in electronics packaging, but in many other application areas as well. PRE-ELEC® ESD 5300 is RoHS compliant. Processing: PRE-ELEC® ESD 5300 compound can be processed in 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-ESD-5300-Static-Dissipative-Thermoplastic-Compound.php

Physical Properties	Metric	English	Comments
Density	0.920 g/cc	0.0332 lb/in ³	
Thickness	102 microns	4.00 mil	
Linear Mold Shrinkage	0.016 cm/cm	0.016 in/in	ISO 294-4
Melt Flow	10 g/10 min @Load 2.16 kg, Temperature 230 °C	10 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength	13.0 MPa	1890 psi	ISO 527
Tensile Strength, Yield	28.0 MPa	4060 psi	ISO 527
Elongation at Break	200 %	200 %	ISO 527
Elongation at Yield	17 %	17 %	ISO 527
Flexural Modulus	1.30 GPa	189 ksi	ISO 178
Izod Impact, Notched (ISO)	6.00 kJ/m ² @Thickness 4.00 mm, Temperature 23.0 °C	2.86 ft-lb/in ² @Thickness 0.157 in, Temperature 73.4 °F	ISO 180
Izod Impact, Unnotched (ISO)	NB @Thickness 4.00 mm,	NB @Thickness 0.157 in,	ISO 180

Mechanical Properties	Temperature 23.0 °C Metric	Temperature 73.4 °F English	Comments
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Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	100 °C	212 °F	75/Method Bf
Deflection Temperature at 1.8 MPa (264 psi)	60.0 °C	140 °F	75/Method Af
Vicat Softening Point	145 °C	293 °F	ISO 306/A50

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Surface Resistance	1.00e+9 - 1.00e+10 ohm	1.00e+9 - 1.00e+10 ohm	ISO IEC 61340-5-1
Static Decay	<= 1.0 sec	<= 1.0 sec	ISO IEC 61340-5-1

Processing Properties	Metric	English	Comments
Zone 1	180 °C	356 °F	Cylinder
	210 °C	410 °F	Die
Zone 2	190 °C	374 °F	Cylinder
	210 °C	410 °F	Die
Zone 3	200 °C	392 °F	Die
	200 °C	392 °F	Cylinder
Zone 4	210 °C	410 °F	Die
	210 °C	410 °F	Cylinder
Zone 5	210 °C	410 °F	Die
	210 °C	410 °F	Cylinder
Melt Temperature	190 - 210 °C	374 - 410 °F	
Mold Temperature	30.0 - 40.0 °C	86.0 - 104 °F	
Roll Temperature	40.0 °C	104 °F	2nd Roll
	40.0 °C	104 °F	3rd Roll
	50.0 °C	122 °F	1st Roll

Processing Properties	Metric	English	Comments
Drying Temperature	60.0 - 80.0 °C	140 - 176 °F	Pre-drying in a dehumidifier
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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