

Premix Thermoplastics PRE-ELEC® ESD 5500 Static Dissipative Thermoplastic Compound

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

Material Notes:

PRE-ELEC® ESD 5500 is a static dissipative thermoplastic compound based on polypropylene. The dissipative property is permanent and built into the polymer chain. PRE-ELEC® ESD 5500 can be injection moulded, extruded, blow moulded and blown into film. Surface resistance values of 10⁹ Ω (EOS/ESD S11.11-1993, IEC 61340-5-1) can be achieved with optimum processing parameters. The products made out of PRE-ELEC® ESD 5500 are washable, reusable and recyclable. PRE-ELEC® ESD 5500 is designed for clean applications with extremely low amount of extractable ions. PRE-ELEC® ESD 5500 is RoHS compliant. Applications: Bins, trays, bottles and bags 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. Processing: PRE-ELEC® ESD 5500 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-5500-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	8.0 g/10 min @Load 2.16 kg, Temperature 230 °C	8.0 g/10 min @Load 4.76 lb, Temperature 446 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength	16.0 MPa	2320 psi	ISO 527
Tensile Strength, Yield	20.0 MPa	2900 psi	ISO 527
Elongation at Break	600 %	600 %	ISO 527
Elongation at Yield	15 %	15 %	ISO 527
Tensile Modulus	0.250 GPa	36.3 ksi	ISO 527
Flexural Modulus	1.10 GPa	160 ksi	ISO 178
Izod Impact, Notched (ISO)	13.0 kJ/m ² @Thickness 4.00 mm, Temperature 23.0 °C	6.19 ft-lb/in ² @Thickness 0.157 in, Temperature 73.4 °F	ISO 180
	NB	NB	

Impact, Unnotched (ISO)			
Mechanical Properties	Metric	English	Comments
	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	ISO 180

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	80.0 °C	176 °F	75/Method Bf
Deflection Temperature at 1.8 MPa (264 psi)	50.0 °C	122 °F	75/Method Af
Vicat Softening Point	135 °C	275 °F	ISO 306/A50
Flammability, UL94	HB	HB	RD524
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	HB	HB	RD524
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Surface Resistance	1.00e+9 ohm	1.00e+9 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

Processing Properties	40.0 °C Metric	104 °F English	3rd Roll Comments
	50.0 °C	122 °F	1st Roll
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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