Premix Thermoplastics PRE-ELEC® ESD 7120

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

PRE-ELEC ESD 7120 is a static dissipative thermoplastic compound based on ABS. The dissipative property is permanent and built into the polymer chain. PRE-ELEC ESD 7120 has been developed for injection molding and for the extrusion of thermoformable mono- or multi-layer sheet. The products made out of PRE-ELEC ESD 7120 are transparent, washable, reusable and recyclable. Surface resistance values of 108 ohms (EOS/ESD S11.11-1993, IEC 61340-5-1) can be achieved with optimum processing parameters.Typical applications include trays, tote bins, crates and technical parts which give permanent ESD protection for the electronics, medical, pharmaceutical and paper handling industries. PRE-ELEC ESD 7120 can also be used as covers and lids as it is transparent.Information provided by Premix Thermoplastics Inc.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Premix-Thermoplastics-PRE-ELEC-ESD-7120.php

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in³	
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	4 mm thick;10.0 mm wide molded rod; ISO 294-4
Melt Flow	7.0 g/10 min @Load 5.00 kg, Temperature 200 °C	7.0 g/10 min @Load 11.0 lb, Temperature 392 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	73	73	400 um thick sheet; ISO 868
Tensile Strength, Ultimate	23.0 MPa	3340 psi	4.0 mm thick, 10.0 mm wide molded rod; ISO 527
Tensile Strength, Yield	34.0 MPa	4930 psi	4.0 mm thick, 10.0 mm wide molded rod; ISO 527
Elongation at Break	25 %	25 %	4.0 mm thick, 10.0 mm wide molded rod; ISO 527
Elongation at Yield	6.0 %	6.0 %	4.0 mm thick, 10.0 mm wide molded rod; ISO 527
Modulus of Elasticity	1.60 GPa	232 ksi	4 mm thick;10.0 mm wide molded rod; ISO 178
Izod Impact, Notched	0.600 J/cm @Thickness 4.00 mm, Temperature 23.0 °C	1.12 ft-lb/in @Thickness 0.157 in, Temperature 73.4 °F	ISO 180
Izod Impact, Unnotched	4.00 J/cm @Thickness 4.00 mm, Temperature 23.0 °C	7.49 ft-lb/in @Thickness 0.157 in, Temperature 73.4 °F	ISO 180

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	84.0 °C	183 °F	4 mm thick;10.0 mm wide molded rod; ISO 75/Method Bf
Deflection Temperature at 1.8 MPa (264 psi)	70.0 °C	158 °F	4 mm thick;10.0 mm wide molded rod; ISO 75/Method Af
Vicat Softening Point	81.0 °C	178 °F	Rate B; 4 mm thick;10.0 mm wide molded rod; ISO 306/B50
	101 °C	214 °F	Rate A; 4 mm thick;10.0 mm wide molded rod; 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+10 ohm	<= 1.00e+10 ohm	400 um thick sheet; ISO IEC 61340-5-1
Static Decay	<= 2.0 sec	<= 2.0 sec	400 um thick sheet; ISO IEC 61340-5-1

Processing Properties	Metric	English	Comments
Middle Barrel Temperature	170 °C	338 °F	Zone 1; Cylinder
	190 °C	374 °F	Zone 6; Cylinder
	190 °C	374 °F	Zone 4; Cylinder
	190 °C	374 °F	Zone 5; Cylinder
	190 °C	374 °F	Zone 2; Cylinder
	190 °C	374 °F	Zone 3; Cylinder
Die Temperature	188 °C	370 °F	Zone 5
	188 °C	370 °F	Zone 2
	188 °C	370 °F	Zone 3
	188 °C	370 °F	Zone 4
	188 °C	370 °F	Zone 1
Melt Temperature	180 - 210 °C	356 - 410 °F	
Mold Temperature	30.0 - 70.0 °C	86.0 - 158 °F	
Roll Temperature	50.0 °C	122 °F	3rd Roll

Processing Properties	Metric	English	Comments
	60.0 °C	140 °F	1st Roll
Drying Temperature	70.0 - 80.0 °C @Time 10800 - 14400 sec	158 - 176 °F @Time 3.00 - 4.00 hour	Pre-drying in a dehumidifier
Moisture Content	<= 0.15 %	<= 0.15 %	When Produced
Injection Pressure	75.2 - 120 MPa	10900 - 17400 psi	
Shelf Life	12.0 Month	12.0 Month	Normal Storing Conditions

Descriptive Properties	Value	Comments
Appearance	Granule	
Color	Transparent	
Injection Speed	Moderate	
Post Pressure, psi	5800 - 8700	

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