

## Premix Thermoplastics PRE-ELEC® ESD 7100

Category : Polymer , Thermoplastic , ABS Polymer

### Material Notes:

PRE-ELEC ESD 7100 is a static dissipative thermoplastic compound based on ABS. The dissipative property is permanent and built into the polymer chain. PRE-ELEC ESD 7100 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 7100 are washable, reusable and recyclable. Surface resistance values of 10<sup>8</sup> 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 7100 can be colored into various bright colors. Information provided by Premix Thermoplastics Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Premix-Thermoplastics-PRE-ELEC-ESD-7100.php](http://www.lookpolymers.com/polymer_Premix-Thermoplastics-PRE-ELEC-ESD-7100.php)

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in <sup>3</sup>	
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	5.0 g/10 min @Load 5.00 kg, Temperature 200 °C	5.0 g/10 min @Load 11.0 lb, Temperature 392 °F	ISO 1133
High Load Melt Index	20 g/10 min @Load 21.6 kg, Temperature 200 °C	20 g/10 min @Load 47.6 lb, Temperature 392 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	73 @Thickness 1.00 mm	73 @Thickness 0.0394 in	sheet; ISO 868
Tensile Strength, Ultimate	27.0 MPa	3920 psi	4.0 mm thick, 10.0 mm wide molded rod; ISO 527
Tensile Strength, Yield	35.0 MPa	5080 psi	4.0 mm thick, 10.0 mm wide molded rod; ISO 527
Elongation at Break	28 %	28 %	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	1.80 GPa	261 ksi	4 mm thick;10.0 mm wide molded rod; ISO 178
Izod Impact, Notched	1.10 J/cm @Thickness 4.00 mm, Temperature 23.0 °C	2.06 ft-lb/in @Thickness 0.157 in, Temperature 73.4 °F	ISO 180

Mechanical Properties	Metric	English	Comments
Izod Impact, Unnotched	@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)	88.0 °C	190 °F	4 mm thick;10.0 mm wide molded rod; ISO 75/Method Bf
Vicat Softening Point	88.0 °C	190 °F	Rate A; 4 mm thick;10.0 mm wide molded rod; ISO 306/A50

Electrical Properties	Metric	English	Comments
Surface Resistance	<= 1.00e+10 ohm @Thickness 1.00 mm	<= 1.00e+10 ohm @Thickness 0.0394 in	sheet; ISO IEC 61340-5-1
Static Decay	<= 2.0 sec @Thickness 1.00 mm	<= 2.0 sec @Thickness 0.0394 in	sheet; ISO IEC 61340-5-1

Processing Properties	Metric	English	Comments
Middle Barrel Temperature	180 °C	356 °F	Zone 1; Cylinder
	190 °C	374 °F	Zone 2; Cylinder
	200 °C	392 °F	Zone 3; Cylinder
	200 °C	392 °F	Zone 6; Cylinder
	200 °C	392 °F	Zone 4; Cylinder
	200 °C	392 °F	Zone 5; Cylinder
Die Temperature	188 °C	370 °F	Zone 3
	199 °C	390 °F	Zone 4
	199 °C	390 °F	Zone 1
	199 °C	390 °F	Zone 5
	199 °C	390 °F	Zone 2
Melt Temperature	190 - 210 °C	374 - 410 °F	
Mold Temperature	30.0 - 70.0 °C	86.0 - 158 °F	
Roll Temperature	50.0 °C	122 °F	3rd Roll
	60.0 °C	140 °F	2nd Roll

Processing Properties	Metric	English	Comments
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	Whitish	
Injection Speed	Moderate	
Post Pressure, psi	5800 - 8700	

## Contact Songhan Plastic Technology Co.,Ltd.

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