

PRE-ELEC® ESD 7140

Acrylonitrile Butadiene Styrene

Premix Oy

Message:

PRE-ELEC® ESD 7140 is a static dissipative thermoplastic masterbatch based on ABS. The dissipative property is permanent and built into the polymer chain. PRE-ELEC® ESD 7140 has been developed for injection moulding. The products made out of PRE-ELEC® ESD 7140 are washable, reusable and recyclable. Surface resistance values of 1e8 ohms (IEC 61340-5-1, EOS/ESD S11.11-1993) 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 7140 can be coloured into various bright colours.

General Information			
Features	Good Processability		
	Recyclable Material		
Uses	Crates		
	Electrical/Electronic Applications		
	Masterbatch		
	Medical/Healthcare Applications		
	Pharmaceuticals		
Appearance	White		
Forms	Granules		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.08	g/cm ³	ASTM D792
--	1.07	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	32	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.50 to 0.70	%	ASTM D955, ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield	33.0	MPa	ASTM D638, ISO 527-2
--	26.0	MPa	ASTM D638
4.00 mm	26.0	MPa	ISO 527-2
Tensile Elongation			
Yield	5.0	%	ASTM D638, ISO 527-2
Break	38	%	ASTM D638
Break, 4.00 mm	38	%	ISO 527-2
Flexural Modulus (4.00 mm)	1700	MPa	ASTM D790, ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Area)			ASTM D256

-20°C, 4.00 mm	8.41	kJ/m ²	
23°C, 4.00 mm	23.1	kJ/m ²	
Notched Izod Impact Strength ¹			ISO 180
-20°C	9.0	kJ/m ²	
23°C	24	kJ/m ²	
Unnotched Izod Impact (Area)			ASTM D256
-20°C, 4.00 mm	No Break		
23°C, 4.00 mm	No Break		
Unnotched Izod Impact Strength ²			ISO 180
-20°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	85.0	°C	ASTM D648B, ISO 75-2/Bf
1.8 MPa, Unannealed	72.8	°C	ASTM D648A
1.8 MPa, Unannealed	73.0	°C	ISO 75-2/Af
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+9	ohms	ESD STM11.11, IEC 61340-2-3
Static Decay	< 2.0	sec	IEC 61340-5-1
Injection	Nominal Value	Unit	
Drying Temperature	70.0 to 80.0	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	190 to 210	°C	
Mold Temperature	30.0 to 70.0	°C	
Injection Pressure	75.2 to 120	MPa	
Injection Rate	Moderate		
NOTE			
1.	4 mm thickness		
2.	4 mm thickness		

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