

PRE-ELEC® ESD 7120

Acrylonitrile Butadiene Styrene

Premix Oy

Message:

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 moulding 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 1e8 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.

General Information			
Features	Recyclable materials		
	Definition, high		
Uses	Electrical/Electronic Applications		
	Container		
	Drug		
	Medical/nursing supplies		
	Loading box		
Appearance	Clear/transparent		
Forms	Particles		
Processing Method	Extrusion		
	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)	7.0	g/10 min	ISO 1133
Molding Shrinkage			
Flow	0.50 - 0.70	%	ASTM D955
Flow direction	0.50 - 0.70	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	73		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield	33.8	MPa	ASTM D638
Yield	34.0	MPa	ISO 527-2
--	22.8	MPa	ASTM D638
4.00 mm	23.0	MPa	ISO 527-2

Tensile Elongation			
Yield	6.0	%	ASTM D638, ISO 527-2
Fracture	25	%	ASTM D638
Fracture, 4.00mm	25	%	ISO 527-2
Flexural Modulus			
4.00 mm	1590	MPa	ASTM D790
4.00 mm	1600	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 4.00 mm)	2.31	kJ/m ²	ASTM D256
Notched Izod Impact ¹ (23°C)	6.0	kJ/m ²	ISO 180
Unnotched Izod Impact (23°C, 4.00 mm)	15.8	kJ/m ²	ASTM D256
Unnotched Izod Impact Strength ² (23°C)	40	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	83.9	°C	ASTM D648B
0.45 MPa, not annealed	84.0	°C	ISO 75-2/Bf
1.8 MPa, not annealed	70.0	°C	ASTM D648A, ISO 75-2/Af
Vicat Softening Temperature			
--	87.2	°C	ASTM D1525 ³
--	101	°C	ASTM D1525, ISO 306/A50 ⁴
--	87.0	°C	ISO 306/B50
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+10	ohms	ESD STM11.11, IEC 61340-2-3
Injection	Nominal Value	Unit	
Drying Temperature	70.0 - 80.0	°C	
Drying Time	3.0 - 4.0	hr	
Processing (Melt) Temp	180 - 210	°C	
Mold Temperature	30.0 - 70.0	°C	
Injection Pressure	75.2 - 120	MPa	
Injection Rate	Moderate		
Extrusion	Nominal Value	Unit	
Drying Temperature	70.0 - 80.0	°C	
Drying Time	3.0 - 4.0	hr	
Cylinder Zone 1 Temp.	170	°C	
Cylinder Zone 2 Temp.	190	°C	
Cylinder Zone 3 Temp.	190	°C	
Cylinder Zone 4 Temp.	190	°C	
Cylinder Zone 5 Temp.	190	°C	
Extrusion instructions			
Cylinder Zone 6: 190°C			
NOTE			

1.	4 mm thickness
2.	4 mm thickness
3.	标准 B (120°C/h), 载荷2 (50N)
4.	速率 A (50°C/h), 载荷2 (50N)

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

