

PRE-ELEC® PS 1340

Polystyrene Alloy

Premix Oy

Message:

PRE-ELEC® PS 1340 is a conductive thermoplastic concentrate based on polystyrene. Conductivity is achieved by using a high concentration of special conductive carbon black. PRE-ELEC® PS 1340 can be diluted up to 60% with virgin or recycled polystyrene. The actual amount should always be tested as it also depends on the processing conditions.

Typical applications include mono- or co-extruded sheets for thermoformed trays.

General Information			
Additive	Carbon black		
Features	Conductivity		
Uses	Thermoforming Applications		
	Sheet		
Forms	Particles		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/21.6 kg)	1.2	g/10 min	ASTM D1238, ISO 1133
Molding Shrinkage			
Flow	0.40 - 0.60	%	ASTM D955
Flow direction	0.40 - 0.60	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ISO 868
Shaw A	98		ISO 868
Shaw D	73		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield	33.8	MPa	ASTM D638
Yield	34.0	MPa	ISO 527-2
--	40.0	MPa	ASTM D638, ISO 527-2
Tensile Elongation			ASTM D638, ISO 527-2
Yield	4.0	%	ASTM D638, ISO 527-2
Fracture	30	%	ASTM D638, ISO 527-2
Flexural Modulus	1900	MPa	ASTM D790, ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-20°C ¹	6.3	kJ/m ²	ASTM D256
-20°C ²	6.0	kJ/m ²	ISO 179

23°C ³	11	kJ/m ²	ISO 179, ASTM D256
Charpy Unnotched Impact Strength ⁴			
-20°C	61	kJ/m ²	ASTM D256
-20°C	60	kJ/m ²	ISO 179
23°C	No Break		ISO 179, ASTM D256
Notched Izod Impact			ASTM D256
-20°C, 4.00 mm	4.20	kJ/m ²	ASTM D256
23°C, 4.00 mm	52.5	kJ/m ²	ASTM D256
Notched Izod Impact ⁵			ISO 180
-20°C	5.0	kJ/m ²	ISO 180
23°C	52	kJ/m ²	ISO 180
Unnotched Izod Impact			ASTM D256
-20°C, 4.00 mm	54.6	kJ/m ²	ASTM D256
23°C, 4.00 mm	No Break		ASTM D256
Unnotched Izod Impact Strength ⁶			ISO 180
-20°C	55	kJ/m ²	ISO 180
23°C	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	75.0	°C	ASTM D648B, ISO 75-2/Bf
1.8 MPa, not annealed	66.1	°C	ASTM D648A
1.8 MPa, not annealed	66.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	83.9	°C	ASTM D1525 ⁷
--	102	°C	ASTM D1525, ISO 306/A50 ⁸
--	84.0	°C	ISO 306/B50
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+5	ohms	ESD STM11.11, IEC 61340-2-3
Volume Resistivity	< 1.0E+4	ohms · cm	Internal method
Extrusion	Nominal Value	Unit	
Drying Temperature	60.0 - 80.0	°C	
Drying Time	3.0 - 4.0	hr	
Cylinder Zone 1 Temp.	180	°C	
Cylinder Zone 2 Temp.	200	°C	
Cylinder Zone 3 Temp.	200	°C	
Cylinder Zone 4 Temp.	210	°C	
Cylinder Zone 5 Temp.	210	°C	
Extrusion instructions			
Cylinder Zone 6: 210°C			
NOTE			
1.	4 mm thickness		

2.	4 mm thick
3.	4 mm thick
4.	4 mm thick
5.	4 mm thick
6.	4 mm thick
7.	标准 B (120°C/h), 载荷2 (50N)
8.	速率 A (50°C/h), 载荷2 (50N)

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