

PRE-ELEC® PS 1328

Polystyrene Alloy

Premix Oy

Message:

PRE-ELEC® PS 1328 is a conductive thermoplastic compound based on polystyrene. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity. PRE-ELEC® PS 1328 has excellent mechanical properties and is easy to extrude or injection mould. Typical applications include injection moulded tote bins and boxes for ESD sensitive products.

General Information	
Additive	Carbon Black
Features	Conductive
	Good Processability
Uses	Containers
	Crates
Forms	Granules
Processing Method	Extrusion
	Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.11	g/cm ³	ASTM D792
--	1.10	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238, ISO 1133
200°C/21.6 kg	70	g/10 min	
200°C/5.0 kg	3.0	g/10 min	
Molding Shrinkage - Flow	0.40 to 0.60	%	ASTM D955, ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore A	99		
Shore D	79		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield	28.3	MPa	ASTM D638
Yield	28.0	MPa	ISO 527-2
--	22.8	MPa	ASTM D638
--	23.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	8.0	%	
Break	20	%	

Flexural Modulus			
4.00 mm	2210	MPa	ASTM D790
4.00 mm	2200	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹			
-20°C	6.3	kJ/m ²	ASTM D256
-20°C	7.0	kJ/m ²	ISO 179
23°C	9.0	kJ/m ²	ISO 179
23°C	8.4	kJ/m ²	ASTM D256
Charpy Unnotched Impact Strength ²			
-20°C	29	kJ/m ²	ASTM D256
-20°C	30	kJ/m ²	ISO 179
23°C	35	kJ/m ²	ISO 179
23°C	36	kJ/m ²	ASTM D256
Notched Izod Impact (Area)			ASTM D256
-20°C, 4.00 mm	2.10	kJ/m ²	
23°C, 4.00 mm	4.20	kJ/m ²	
Notched Izod Impact Strength ³			ISO 180
-20°C	3.0	kJ/m ²	
23°C	5.0	kJ/m ²	
Unnotched Izod Impact (Area)			ASTM D256
-20°C, 4.00 mm	39.9	kJ/m ²	
23°C, 4.00 mm	50.4	kJ/m ²	
Unnotched Izod Impact Strength ⁴			ISO 180
-20°C	40	kJ/m ²	
23°C	50	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	82.8	°C	ASTM D648B
0.45 MPa, Unannealed	83.0	°C	ISO 75-2/Bf
1.8 MPa, Unannealed	70.0	°C	ASTM D648A, ISO 75-2/Af
Vicat Softening Temperature			
--	97.2	°C	ASTM D1525 ⁵
--	97.0	°C	ISO 306/A50
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+5	ohms	IEC 61340-2-3
Volume Resistivity	< 1.0E+4	ohms · cm	Internal Method
Injection	Nominal Value	Unit	
Drying Temperature	60.0 to 80.0	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	240 to 270	°C	
Mold Temperature	40.0 to 80.0	°C	

Injection Pressure	75.0 to 120	MPa
Injection Rate	Moderate	
NOTE		
1.	4 mm thickness	
2.	4 mm thickness	
3.	4 mm thickness	
4.	4 mm thickness	
5.	Rate A (50°C/h), Loading 2 (50 N)	

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