

PRE-ELEC® PP 1393

Compounded Polypropylene

Premix Oy

Message:

PRE-ELEC® PP 1393 is a conductive thermoplastic concentrate based on polypropylene. Conductivity is achieved by using special conductive carbon black. PRE-ELEC® PP 1393 contains a high load of carbon black and it can be diluted up to 50% with virgin or recycled PP. The actual amount should always be tested as it also depends on the processing conditions.

PRE-ELEC® PP 1393 is developed especially for extrusion of corrugated board. It can be also used for solid sheets and profiles.

General Information			
Additive	Carbon black		
Features	Conductivity		
Uses	Sheet		
	Profile		
Forms	Particles		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.05	g/cm ³	ASTM D792
--	1.06	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/5.0 kg)	0.50	g/10 min	ASTM D1238, ISO 1133
Molding Shrinkage			
Flow	1.3 - 1.6	%	ASTM D955
Flow direction	1.3 - 1.6	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shaw A	97		ASTM D2240, ISO 868
Shaw D	71		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	20.0	MPa	ASTM D638, ISO 527-2
Tensile Elongation (Break)	15	%	ASTM D638, ISO 527-2
Flexural Modulus			
4.00 mm	1520	MPa	ASTM D790
4.00 mm	1500	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹			
-20°C	4.2	kJ/m ²	ASTM D256
-20°C	6.0	kJ/m ²	ISO 179
23°C	8.0	kJ/m ²	ISO 179
23°C	6.3	kJ/m ²	ASTM D256

Charpy Unnotched Impact Strength ²			
-20°C	No Break		ASTM D256, ISO 179
23°C	No Break		ISO 179, ASTM D256
Notched Izod Impact			ASTM D256
-20°C, 4.00 mm	6.30	kJ/m ²	ASTM D256
23°C, 4.00 mm	18.9	kJ/m ²	ASTM D256
Notched Izod Impact ³			ISO 180
-20°C	8.0	kJ/m ²	ISO 180
23°C	19	kJ/m ²	ISO 180
Unnotched Izod Impact			ASTM D256
-20°C, 4.00 mm	No Break		ASTM D256
23°C, 4.00 mm	No Break		ASTM D256
Unnotched Izod Impact Strength ⁴			ISO 180
-20°C	No Break		ISO 180
23°C	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	87.2	°C	ASTM D648B
0.45 MPa, not annealed	87.0	°C	ISO 75-2/Bf
1.8 MPa, not annealed	52.8	°C	ASTM D648A
1.8 MPa, not annealed	53.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	86.1	°C	ASTM D1525 ⁵
--	152	°C	ASTM D1525, ISO 306/A50 4 ⁶
--	86.0	°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	90.0	°C	
Drying Time	2.0	hr	
Cylinder Zone 1 Temp.	200	°C	
Cylinder Zone 2 Temp.	210	°C	
Cylinder Zone 3 Temp.	210	°C	
Cylinder Zone 4 Temp.	220	°C	
Cylinder Zone 5 Temp.	220	°C	
Extrusion instructions			
Cylinder Zone 6: 220°C			
NOTE			
1.	4 mm thickness		
2.	4 mm thickness		

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

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