

PRE-ELEC® PP 1397

Compounded Polypropylene

Premix Oy

Message:

PRE-ELEC® PP 1397 is a conductive thermoplastic compound based on polypropylene. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity, PRE-ELEC® PP 1397 has excellent mechanical properties and is easy to extrude.

PRE-ELEC® PP 1397 is recommended especially for corrugated sheet.

General Information			
Additive	Carbon black		
Features	Conductivity		
	Workability, good		
Uses	Wave plate		
Forms	Particles		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.969	g/cm ³	ASTM D792
--	0.980	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
230°C/2.16 kg	1.2	g/10 min	ISO 1133
230°C/5.0 kg	6.0	g/10 min	ISO 1133
Molding Shrinkage			
Flow	1.3 - 1.9	%	ASTM D955
Flow direction	1.3 - 1.9	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ISO 868
Shaw A	99		ISO 868
Shaw D	74		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Transverse flow: Yield	22.1	MPa	ASTM D638
Flow: Yield	22.8	MPa	ASTM D638
Transverse flow: Yield	22.0	MPa	ISO 527-2
Flow: Yield	23.0	MPa	ISO 527-2
Across Flow	22.8	MPa	ASTM D638
Flow	24.8	MPa	ASTM D638
-- 1	23.0	MPa	ISO 527-2
-- 2	25.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2

Transverse flow: Yield	16	%	ISO 527-2
Flow: Yield	17	%	ISO 527-2
Fracture ³	480	%	ISO 527-2
Fracture ⁴	500	%	ISO 527-2
Flexural Modulus			
4.00 mm	1380	MPa	ASTM D790
4.00 mm	1400	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁵			
-20°C	17	kJ/m ²	ASTM D256
-20°C	18	kJ/m ²	ISO 179
23°C	45	kJ/m ²	ISO 179
23°C	46	kJ/m ²	ASTM D256
Charpy Unnotched Impact Strength ⁶			
-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	No Break		ASTM D256
23°C, 4.00 mm	No Break		ASTM D256
Notched Izod Impact ⁷			ISO 180
-20°C	No Break		ISO 180
23°C	No Break		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 ⁸			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	90.0	°C	ASTM D648B, 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			
--	150	°C	ASTM D1525 ⁹
--	151	°C	ISO 306/A50
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+4	ohms	IEC 61340-2-3
Volume Resistivity	< 1.0E+3	ohms · cm	Internal method
Extrusion	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	2.0	hr	

Cylinder Zone 1 Temp.	210	°C
Cylinder Zone 2 Temp.	220	°C
Cylinder Zone 3 Temp.	220	°C
Cylinder Zone 4 Temp.	230	°C
Cylinder Zone 5 Temp.	230	°C

Extrusion instructions

Cylinder Zone 6: 230°C

NOTE

1.	Across Flow
2.	Flow
3.	Across Flow
4.	Flow
5.	4 mm thickness
6.	4 mm thickness
7.	4 mm thickness
8.	4 mm thickness
9.	速率 A (50°C/h), 载荷2 (50N)

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