

PRE-ELEC® PP 1375

Compounded Polypropylene

Premix Oy

Message:

PRE-ELEC®PP 1375 is a carbon black filled conductive polypropylene compound with high MFI. In addition to a low electrical resistivity PRE-ELEC®PP 1375 has an excellent balance of mechanical properties and is easy to injection-mould.

Typical applications include injection moulded ESD products such as crates, boxes and tote bins.

General Information			
Additive	Carbon Black		
Features	Conductive		
	Good Processability		
	High Flow		
Uses	Containers		
	Crates		
Forms	Granules		
Processing Method	Injection Molding		
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) (230°C/2.16 kg)	20	g/10 min	ASTM D1238, ISO 1133
Molding Shrinkage - Flow	1.5 to 2.0	%	ASTM D955, ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shore A	95		
Shore D	65		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
--	27.6	MPa	ASTM D638
4.00 mm	28.0	MPa	ISO 527-2
Tensile Strain (Break, 4.00 mm)	14	%	ISO 527-2
Flexural Modulus			
4.00 mm	1310	MPa	ASTM D790
4.00 mm	1300	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	15	kJ/m ²	ISO 179, ASTM D256
Charpy Unnotched Impact Strength ²			
-20°C	50	kJ/m ²	ASTM D256, ISO 179
23°C	No Break		ISO 179, ASTM D256
Notched Izod Impact (Area)			ASTM D256
-20°C, 4.00 mm	4.20	kJ/m ²	
23°C, 4.00 mm	8.41	kJ/m ²	
Notched Izod Impact Strength ³			ISO 180
-20°C	5.0	kJ/m ²	
23°C	9.0	kJ/m ²	
Unnotched Izod Impact (Area)			ASTM D256
-20°C, 4.00 mm	54.6	kJ/m ²	
23°C, 4.00 mm	58.8	kJ/m ²	
Unnotched Izod Impact Strength ⁴			ISO 180
-20°C	55	kJ/m ²	
23°C	59	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	91.1	°C	ASTM D648B
0.45 MPa, Unannealed	91.0	°C	ISO 75-2/Bf
1.8 MPa, Unannealed	53.9	°C	ASTM D648A
1.8 MPa, Unannealed	54.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	149	°C	ASTM D1525 ⁵
--	150	°C	ISO 306/A50
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+4	ohms	ESD STM11.11, IEC 61340-2-3
Volume Resistivity	< 1.0E+3	ohms · cm	Internal Method
Injection	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	2.0	hr	
Processing (Melt) Temp	200 to 250	°C	
Mold Temperature	60.0 to 80.0	°C	
Injection Pressure	60.0 to 80.0	MPa	
Injection Rate	Moderate		
NOTE			
1.	4 mm thickness		
2.	4 mm thickness		
3.	4 mm thickness		
4.	4 mm thickness		

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