

PRE-ELEC® CP 1316

Polyolefin

Premix Oy

Message:

PRE-ELEC®CP 1316 is a carbon black filled conductive thermoplastic compound based on polyolefin copolymer. In addition to a low electrical resistivity. PRE-ELEC®CP 1316 has an excellent balance of mechanical properties and is easy to extrude or injection mould. Typical applications include flexible extruded profiles or tubes together with flexible injection moulded parts. PRE-ELEC®CP 1316 may also be diluted with 10-30% of EVA or PE-LD.

General Information			
Additive	Carbon black		
Features	Conductivity		
	Workability, good		
Uses	Pipe fittings		
	Profile		
Forms	Particles		
Processing Method	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.11	g/cm ³	ASTM D792
--	1.12	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/21.6 kg)	12	g/10 min	ISO 1133
Molding Shrinkage			
Flow	0.12	%	ASTM D955
Flow direction	1.2	%	ISO 294-4

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ISO 868
Shaw A	93		ISO 868
Shaw D	43		ISO 868

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
--	11.0	MPa	ASTM D638
4.00 mm	11.0	MPa	ISO 527-2
Tensile Strain (Break, 4.00 mm, Injection Molded)	500	%	ISO 527-2
Flexural Modulus			
4.00 mm	1100	MPa	ASTM D790

4.00 mm	110	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-20°C ¹	40	kJ/m ²	ASTM D256, ISO 179
23°C ²	No Break		ISO 179, ASTM D256
Charpy Unnotched Impact Strength ³			
-20°C	No Break		ASTM D256, ISO 179
2°C	No Break		ISO 179
23°C	No Break		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 ⁴			
			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 ⁵			
			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, Unannealed)	35.0	°C	ASTM D648B, ISO 75-2/Bf
Vicat Softening Temperature	50.0	°C	ISO 306/A50, ASTM D1525 ⁶
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+3	ohms	ESD STM11.11, IEC 61340-2-3
Volume Resistivity	< 1.0E+2	ohms · cm	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	60.0	°C	
Drying Time	3.0	hr	
Processing (Melt) Temp	180 - 220	°C	
Mold Temperature	40.0 - 80.0	°C	
Injection Pressure	60.0	MPa	
Injection Rate	Moderate		
Extrusion	Nominal Value	Unit	
Drying Temperature	60.0	°C	
Drying Time	3.0	hr	
Cylinder Zone 1 Temp.	180	°C	
Cylinder Zone 2 Temp.	180	°C	
Cylinder Zone 3 Temp.	190	°C	

Cylinder Zone 4 Temp.	190	°C
Cylinder Zone 5 Temp.	200	°C

Extrusion instructions

Cylinder Zone 6: 200°C

NOTE

1.	4 mm thickness
2.	4 mm thick
3.	4 mm thick
4.	4 mm thick
5.	4 mm thick
6.	速率 A (50°C/h), 载荷2 (50N)

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