Technical Datasheet

Item Description
PRE-ELEC® PE 1292

Item ID
1292

PE-HD compound for extrusion and injection molding
Electrically conductive

Typical end product
Sheets

Applications
Pipes
Simple injection molded parts

PRE-ELEC® PE 1292 is a conductive thermoplastic compound based on PE-HD. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity it has an excellent balance of mechanical properties and is easy to extrude. It can also be welded or vacuum formed without pre-drying. PE 1292 can also be used in injection molding.

Special properties	Unit	Value	Method
Volume resistivity	Ω.cm	70	PRE021
Surface resistance	Ω	2E+03	IEC 61340-2-3

General properties	Unit	Value	Method
Density	g/cm3	1,03	ISO 1183
Melt flow rate at 190°C	g/10 min		ISO 1133
5.0 kg		1,5	
10.0 kg		6	
21.6 kg		35	
Mould shrinkage	%	1.5 - 2.5	ISO 294-4
Vicat, Rate A	°C	128	ISO 306/A50
Vicat, Rate B	°C	81	ISO 306/B50
HDT, 0.45 MPa	°C	87	ISO 75/Bf
HDT, 1.80 MPa	°C	84	ISO 75/Af

Mechanical properties	Unit	Value	Method
Stress at break	MPa	31	ISO 527
Strain at break	%	70	ISO 527
Flexural modulus	MPa	1100	ISO 178
Impact strength, Charpy	kJ/m2		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		20	
Unnotched, -20°C		NB	
Notched, -20°C		11	
Hardness, Shore A	-	> 90	ISO 868
Hardness, Shore D	-	66	ISO 868

MFR is measured from granulates.
Test specimen: injection moulded rod; ISO 527 TYPE 1A; Thickness: 10 mm, width: 4 mm

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Processing instructions

		Unit	Processing range		
Extrusion					
	Cylinder temperature profile	°C	200	-	230
	Die temperature profile	°C	220	-	240
	Tool/Roll temperature	°C	70	-	50
Injection moulding					
	Material temperature	°C	210	-	250
	Mould temperature	°C	40	-	80
	Injection pressure	Bar	750	-	1200
	Injection speed		moderate		

Notes

Drying of the product is recommended for 2-4 hours at 60-80°C prior to use.

These parameters are for guidance only. The process parameters should always be optimized for the used equipment. The instructions of the equipment manufacturer should be followed. Caution should be taken when handling molten material as it is extremely hot and may cause severe burns.

Storage

Product-specific details are mentioned in the notes above. The general minimum shelf life for Premix's product is 3 years with the following conditions: 1) original package is unopened, 2) the storage area and conditions provide protection from direct sunlight and significant changes in storage temperature, 3) the product is pre-dried accordingly before use.