

# PRE-ELEC<sup>®</sup> PE 1292

PE-HD extrusion compound  
Electrically conductive

Applications: Sheets  
Pipes

PRE-ELEC<sup>®</sup> 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.

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
Specific gravity	g/cm <sup>3</sup>	1.03	ISO 1183
Melt flow rate at 190°C	g/10 min		ISO 1133
5.0 kg		1.5	
10.0 kg		6.0	
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
Tensile strength	MPa	31	ISO 527
Tensile strain at break	%	70	ISO 527
Flexural modulus	MPa	1100	ISO 178
Impact strength, Charpy	kJ/m <sup>2</sup>		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; Thickness: 10 mm, width: 4 mm

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This product is REACH and RoHS compliant

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## Processing instructions

	Unit	Processing range
<b>Extrusion</b>		
Cylinder temperature profile	°C	200 - 230
Die temperature profile	°C	220 - 240
Tool/Roll temperature	°C	70 - 50
<b>Injection moulding</b>		
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.

Processing conditions as with filled PE-HD. 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.

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