

# PRE-ELEC<sup>®</sup> PBT 1455

PBT injection moulding compound  
Electrically conductive

Applications: Technical parts  
ATEX

PRE-ELEC<sup>®</sup> PBT 1455 is a conductive thermoplastic compound based on PBT. Conductivity is achieved by using special conductive carbon black. The product has excellent mechanical properties accompanied by good chemical and wear resistance.

Special properties	Unit	Value	Method
Volume resistivity	Ω.cm	100	PRE021
Surface resistance	Ω	3E+03	IEC 61340-2-3

General properties	Unit	Value	Method
Specific gravity	g/cm <sup>3</sup>	1.32	ISO 1183
Melt flow rate at 240°C	g/10 min		ISO 1133
10.0 kg		14.0	
21.6 kg		60.0	
Mould shrinkage	%	1.6 - 2.2	ISO 294-4
Vicat, Rate A	°C	219	ISO 306/A50
Vicat, Rate B	°C	188	ISO 306/B50
HDT, 0.45 MPa	°C	150	ISO 75/Bf
HDT, 1.80 MPa	°C	52	ISO 75/Af

Mechanical properties	Unit	Value	Method
Tensile strength	MPa	39	ISO 527
Tensile strain at break	%	14	ISO 527
Flexural modulus	MPa	2000	ISO 178
Impact strength, Charpy	kJ/m <sup>2</sup>		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		12	
Unnotched, -20°C		NB	
Notched, -20°C		11	
Hardness, Shore D	-	84	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	
Injection moulding			
Material temperature	°C	250	- 280
Mould temperature	°C	80	- 90
Injection pressure	Bar	1000	- 1400
Injection speed			moderate / high

## Notes

Drying of the product is recommended for 3-4 hours at 110-130°C prior to use.

Processing conditions as with filled PBT. 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. Overheated material can be cooled with e.g. water.

## 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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