

Item Description

Item ID

PRE-ELEC[®] PBT 1455

1455

PBT injection moulding compound
Electrically conductive

Typical end product
Applications

Technical parts
ATEX

PRE-ELEC[®] 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 ³	1.32	ISO 1183
Melt flow rate at 240°C	g/10 min		ISO 1133
10.0 kg		14	
21.6 kg		60	
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 ²		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

Item Description

Item ID

PRE-ELEC[®] PBT 1455
1455

Visit Premix Data Center for more detailed information of our products at www.premixgroup.com/data-center/

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.

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.

The information in this datasheet represents typical values obtained by us, and shall not be regarded as a product specification. The right to make any changes to the content and appearance of this document is reserved by Premix Oy. We condition that the product will be inspected and qualified by the customer for their process to meet the specific requirements set by application, processing equipment and the end product. The user of this product is held responsible for the evaluation of this product's suitability concerning applied legislation and possible patent infringements. We do not intentionally add or incorporate hazardous substances in our production.

PRE-ELEC[®] is a registered trademark of Premix.