

PRE-ELEC[®] PP 1380

PP injection moulding compound
Electrically conductive

Applications: Technical parts

PRE-ELEC[®] PP 1380 is a conductive thermoplastic compound based on polypropylene. Conductivity is achieved by using special conductive carbon black. In addition to a very low electrical resistivity, it has an excellent balance of mechanical properties and it is easy to process. The product is recommended for automotive, medical and electronics industry applications where very low electrical resistivity is required.

Special properties	Unit	Value	Method
Volume resistivity	Ω.cm	3	PRE021
Surface resistance	Ω	6E+02	IEC 61340-2-3

General properties	Unit	Value	Method
Specific gravity	g/cm ³	1.06	ISO 1183
Melt flow rate at 230°C 5.0 kg	g/10 min	1.5	ISO 1133
Mould shrinkage	%	1.2 - 1.7	ISO 294-4
Vicat, Rate A	°C	150	ISO 306/A50
Vicat, Rate B	°C	80	ISO 306/B50
HDT, 0.45 MPa	°C	104	ISO 75/Bf
HDT, 1.80 MPa	°C	58	ISO 75/Af

Mechanical properties	Unit	Value	Method
Tensile strength	MPa	26	ISO 527
Tensile strain at break	%	5	ISO 527
Flexural modulus	MPa	1900	ISO 178
Impact strength, Charpy	kJ/m ²		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		8	
Unnotched, -20°C		61	
Notched, -20°C		3	
Hardness, Shore A	-	> 90	ISO 868
Hardness, Shore D	-	72	ISO 868

MFR is measured from granulates

Test specimen: injection moulded rod; Thickness: 10 mm, width: 4 mm

PRE-ELEC[®] PP 1380

This product is REACH and RoHS compliant

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

Processing instructions

	Unit	Processing range	
Injection moulding			
Material temperature	°C	200	- 260
Mould temperature	°C	60	- 80
Injection pressure	Bar	600	- 800
Injection speed			moderate

Notes

Drying of the product is recommended for 2-3 hours at 80°C prior to use.

Processing conditions as with filled PP. 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.

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.