

# Item Description

## Item ID

PRE-ELEC<sup>®</sup> PP 18380  
PP18380

PP extrusion compound  
Electrically conductive

Typical end product  
Cables

Applications  
Conductive screen

PRE-ELEC<sup>®</sup> PP 18380 is a conductive thermoplastic compound based on polypropylene. 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.

Special properties	Unit	Value	Method
Volume resistivity(*)	Ω.cm	5	PRE021
General properties	Unit	Value	Method
Specific gravity	g/cm <sup>3</sup>	1,02	ISO 1183
Melt flow rate at 230°C	g/10 min		ISO 1133
5.0 kg		0,3	
10.0 kg		2,6	
Vicat, Rate A	°C	157	ISO 306/A50
Vicat, Rate B	°C	87	ISO 306/B50
Mechanical properties	Unit	Value	Method
Tensile strength(*)	MPa	45	ISO 527
Tensile strain at break(*)	%	370	ISO 527
Tensile modulus(*)	MPa	1100	ISO 527

MFR is measured from granulates. Tensile test speed: 25 mm/min, Sample test length 50mm  
 Test specimen: injection moulded rod; ISO 527 TYPE 1A; Thickness: 10 mm, width: 4 mm  
 (\* extruded tape; ISO 527-2 Type 1B, thickness 400 - 800 µm)



Item Description  
Item ID

PRE-ELEC<sup>®</sup> PP 18380  
PP18380

Visit Premix Data Center for more detailed information of our products at [www.premixgroup.com/data-center/](http://www.premixgroup.com/data-center/)

Processing instructions

	Unit	Processing range
Extrusion		
Cylinder temperature profile	°C	190 - 230
Die temperature profile	°C	205 - 230
Tool/Roll temperature	°C	90 - 60

Notes

Drying of the product is recommended for 2-3 hours at 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.

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<sup>®</sup> PP 18380 is a registered trademark of Premix.