

# PRE-ELEC<sup>®</sup> PA 1406

PA6 injection moulding compound  
Electrically conductive  
Carbon fiber

Applications: Technical parts  
Housings, Enclosures

PRE-ELEC<sup>®</sup> PA 1406 is a conductive thermoplastic compound based on polyamide 6 filled with 16 wt% carbon fiber. In addition to a low electrical resistivity it has an excellent balance of mechanical properties due to carbon fibre reinforcement. In addition it is easy to injection mould.

Special properties	Unit	Value	Method
Surface resistance	Ω	4E+05	IEC 61340-2-3

General properties	Unit	Value	Method
Specific gravity	g/cm <sup>3</sup>	1.14	ISO 1183
Mould shrinkage	%	0.20	ISO 294-4
Vicat, Rate A	°C	217.0	ISO 306/A50
HDT, 0.45 MPa	°C	214.0	ISO 75/Bf
HDT, 1.80 MPa	°C	193.0	ISO 75/Af

Mechanical properties	Unit	Value	Method
Tensile strength	MPa	110	ISO 527
Tensile strain at break	%	5	ISO 527
Flexural modulus	MPa	6500	ISO 178
Impact strength, Charpy	kJ/m <sup>2</sup>		ISO 179
Unnotched, +23°C		50	
Notched, +23°C		14	
Unnotched, -20°C		48	
Notched, -20°C		9	
Hardness, Shore D	-	81	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	220	- 280
Mould temperature	°C	60	- 80
Injection pressure	Bar	600	- 800
Injection speed			moderate

## Notes

Drying of the product is recommended for 2-4 hours at 80°C prior to use.

Processing conditions as with filled PA6. 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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