

Item Description

Item ID

PRE-ELEC[®] PA 1411
1411

PA6 concentrate
Electrically conductive

Typical end product
Enclosures

Applications
Technical parts

PRE-ELEC[®] PA 1411 is a conductive thermoplastic concentrate based on polyamide 6. Conductivity is achieved by using special conductive carbon black. It contains a high load of carbon black and it is recommended to be diluted with PA6. The actual amount should always be tested as it also depends on the processing conditions.

The values with the exception of MFR are measured from dilution: 30% PA6

Special properties	Unit	Value	Method
Volume resistivity - See percolation curve	$\Omega \cdot \text{cm}$	35	PRE021
Surface resistance	Ω	9E+02	IEC 61340-2-3

General properties	Unit	Value	Method
Density	g/cm ³	1,25	ISO 1183
Mould shrinkage	%	1,2	ISO 294-4
Vicat, Rate A	°C	220	ISO 306/A50
Vicat, Rate B	°C	200	ISO 306/B50
HDT, 0.45 MPa	°C	180	ISO 75/Bf
HDT, 1.80 MPa	°C	72	ISO 75/Af

Mechanical properties	Unit	Value	Method
Tensile strength	MPa	70	ISO 527
Tensile strain at break	%	5	ISO 527
Flexural modulus	MPa	3200	ISO 178
Impact strength, Charpy	kJ/m ²		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		8	
Unnotched, -20°C		40	
Notched, -20°C		8	
Hardness, Shore D	-	84	ISO 868

MFR is measured from granulates.

Test specimen: injection moulded rod; ISO 527 TYPE 1A; Thickness: 10 mm, width: 4 mm

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Processing instructions

	Unit	Processing range
Injection moulding		
Material temperature	°C	240 - 300
Mould temperature	°C	60 - 80
Injection pressure	Bar	600 - 800
Injection speed		moderate

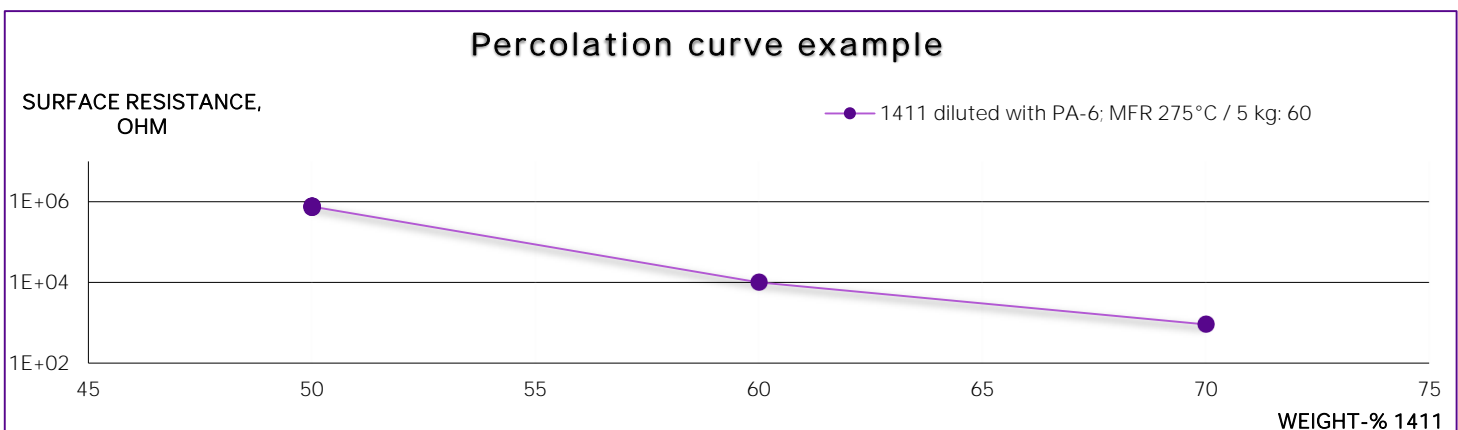
Notes

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

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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