

# Item Description

## Item ID

**PRE-ELEC<sup>®</sup> PS 18014**  
**PS18014**

**PS injection moulding compound**  
**Electrically conductive**

**Typical end product**  
**Reels**

**Applications**  
**Boxes, Crates**  
**Cases**

PRE-ELEC<sup>®</sup> PS 18014 is a conductive thermoplastic compound based on polystyrene. 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 injection mould.

Special properties	Unit	Value	Method
Volume resistivity	Ω.cm	100	PRE021
Surface resistance	Ω	1E3-1E4	IEC 61340-2-3

General properties	Unit	Value	Method
Specific gravity	g/cm <sup>3</sup>	1.09	ISO 1183
Melt flow rate at 200°C	g/10 min		ISO 1133
5.0 kg		6	
Mould shrinkage	%	0.4 - 0.6	ISO 294-4
Vicat, Rate A	°C	91	ISO 306/A50
HDT, 0.45 MPa	°C	82	ISO 75/Bf

Mechanical properties	Unit	Value	Method
Tensile strength	MPa	19	ISO 527
Tensile strain at break	%	30	ISO 527
Flexural modulus	MPa	1500	ISO 178
Impact strength, Charpy	kJ/m <sup>2</sup>		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		10	
Hardness, Shore A	-	>90	ISO 868
Hardness, Shore D	-	75	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

#### Injection moulding

	Unit	Processing range		
Material temperature	°C	200	-	250
Mould temperature	°C	30	-	70
Injection pressure	Bar	600	-	1200
Injection speed				moderate

### Notes

Drying of the product is recommended for 2-4 hours at 60-80°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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