

Item Description

Item ID

PRE-ELEC[®] PC-ABS 1420

1420

PC-ABS extrusion compound
Electrically conductive

Typical end product
Sheets

Applications
Thermoformed trays
Injection molded part

PRE-ELEC[®] PC-ABS 1420 is a conductive thermoplastic compound based on a PC-ABS blend. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity it has excellent mechanical properties and is easy to extrude. The compound can also be injection molded.

Special properties	Unit	Value	Method
Volume resistivity(*)	Ω.cm	300	PRE021
Surface resistance(*)	Ω	1E3-1E4	IEC 61340-2-3
Flammability	-	HB	RD524

General properties	Unit	Value	Method
Density	g/cm ³	1.19	ISO 1183
Melt flow rate at 280°C	g/10 min		ISO 1133
5.0 kg		3.5	
10.0 kg		17.7	
Mould shrinkage	%	0.7 - 0.9	ISO 294-4
Vicat, Rate A	°C	143	ISO 306/A50
Vicat, Rate B	°C	123	ISO 306/B50
HDT, 0.45 MPa	°C	136	ISO 75/Bf
HDT, 1.80 MPa	°C	116	ISO 75/Af

Mechanical properties	Unit	Value	Method
Stress at break(*)	MPa	44	ISO 527
Strain at break(*)	%	36	ISO 527
Flexural modulus	MPa	2300	ISO 178
Impact strength, Charpy	kJ/m ²		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		14	
Unnotched, -20°C		NB	
Notched, -20°C		6	
Hardness, Shore D	-	77	ISO 868

MFR is measured from granulates.

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)

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Processing instructions

	Unit	Processing range
Extrusion		
Cylinder temperature profile	°C	280 - 300
Die temperature profile	°C	290 - 300
Tool/Roll temperature	°C	90 - 70
Injection moulding		
Material temperature	°C	270 - 290
Mould temperature	°C	80 - 100
Injection pressure	Bar	1000 - 1500
Injection speed		moderate

Notes

Drying of the product is recommended for 3-4 hours at 100°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. Overheated material can be cooled with e.g. water.

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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