

Item Description

Item ID

PRE-ELEC[®] PE18664
PE18664

PE-HD extrusion compound
Electrically conductive
ESCR resistance

Typical end product
Cable jacket

Applications
Semicon jacket layer

PRE-ELEC[®] PE 18664 is a conductive thermoplastic compound based on PE-HD. It has excellent ESCR. 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 and blow mould.

Special properties	Unit	Value	Method
Volume resistivity(*)	Ω.cm	20	PRE021
Surface resistance(*)	Ω	2E+02	IEC 61340-2-3

General properties	Unit	Value	Method
Specific gravity	g/cm ³	1,08	ISO 1183
Melt flow rate at 190°C	g/10 min		ISO 1133
5.0 kg		1	
HDT, 0.45 MPa	°C	84	ISO 75/Bf
HDT, 1.80 MPa	°C	46	ISO 75/Af

Mechanical properties	Unit	Value	Method
Tensile strength(*)	MPa	33	ISO 527
Yield strength(*)	MPa	20	ISO 527
Tensile strain at break(*)	%	>1000	ISO 527
Flexural modulus	MPa	970	ISO 178
Impact strength, Charpy	kJ/m ²		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		17	
Unnotched, -20°C		NB	
Notched, -20°C		3	
Hardness, Shore D(*)	-	60	ISO 868

MFR is measured from granulates. Tensile test speed: 50 mm/min, Sample test length 20mm
 Test specimen: injection moulded rod; ISO 527 TYPE 1A; Thickness: 10 mm, width: 4 mm
 (* extruded tape; ISO 527-2 Type 5A, thickness 400 - 800 µm)



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Processing instructions

	Unit	Processing range
Extrusion		
Cylinder temperature profile	°C	180 - 200
Die temperature profile	°C	200 - 200
Tool/Roll temperature	°C	70 - 50

Notes

Drying of the product is recommended for 2-3 hours at 60°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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