

Item Description

Item ID

PRE-ELEC[®] PE19935
PE19935

PE-HD extrusion compound
Semiconductive
ESCR resistance

Typical end product
Cables

Applications
Semicon jacket layer

PRE-ELEC[®] PE 19935 is a semiconductive thermoplastic compound based on high density polyethylene for cable jacketing applications. It is engineered to have excellent ESCR-properties with premium surface quality and dispersion of carbon black. It is easy to extrude with high and consistent level of quality.

Special properties	Unit	Value	Method
Volume resistivity(*)	Ω.cm	15	PRE021
Surface resistance	Ω	<1E3	IEC 61340-2-3

General properties	Unit	Value	Method
Density	g/cm3	1,03	ISO 1183
Melt flow rate at 190°C 5.0 kg	g/10 min	2	ISO 1133
Vicat, Rate A	°C	111	ISO 306/A50
Vicat, Rate B	°C	54	ISO 306/B50
HDT, 0.45 MPa	°C	58	ISO 75/Bf
HDT, 1.80 MPa	°C	45	ISO 75/Af

Mechanical properties	Unit	Value	Method
Tensile strength(*)	MPa	24	ISO 527
Yield strength(*)	MPa	18	ISO 527
Tensile strain at break(*)	%	450	ISO 527
Flexural modulus	MPa	650	ISO 178
Impact strength, Charpy	kJ/m2		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		60	
Unnotched, -20°C		NB	
Notched, -20°C		5	
Hardness, Shore D	-	50	ISO 868

MFR is measured from granulates. Tensile test speed: 25 mm/min, Sample test length 50mm
 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 - 220
Die temperature profile	°C	180 - 230
Tool/Roll temperature	°C	70 - 50

Notes

Drying of the product is recommended for 2-3 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. Avoid prolonged melt temperatures above 250 °C.

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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