Technical Datasheet

PRE-ELEC® PE 18480

PE-TPO extrusion compound
Electrically conductive
Flexible

Applications: Flextubes
Profiles

PRE-ELEC® PE 18480 is a conductive flexible thermoplastic compound based on polyethylene with good low temperature properties. The conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity, the product has excellent mechanical properties and is easy to extrude.

Special properties	Unit	Value	Method
Volume resistivity(*	Ω.cm	8	PRE021
Surface resistance	Ω	4E+02	IEC 61340-2-3

General properties	Unit	Value	Method
Specific gravity	g/cm3	1,05	ISO 1183
Melt flow rate at 190°C	g/10 min		ISO 1133
5.0 kg		0,5	
10.0 kg		2,2	
Vicat, Rate A	°C	92	ISO 306/A50
Vicat, Rate B	°C	68	ISO 306/B50
HDT, 0.45 MPa	°C	49,5	ISO 75/Bf
HDT, 1.80 MPa	°C	37,5	ISO 75/Af

Mechanical properties	Unit	Value	Method
Tensile strength(*	MPa	33	ISO 527
Tensile strain at break(*	%	900	ISO 527
Flexural modulus	MPa	200	ISO 178
Impact strength, Charpy	kJ/m2		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		NB	
Unnotched, -20°C		NB	
Notched, -20°C		NB	
Hardness, Shore D	-	47	ISO 868

MFR is measured from granulates
Test specimen: injection moulded rod; Thickness: 10 mm, width: 4 mm
***) extruded tape; Thickness 600-800 µm**

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This product is REACH and RoHS compliant

Visit Premix Data Center for more detailed information of our products at
www.premixgroup.com/data-center-main

Processing instructions

		Unit	Processing range		
Extrusion					
	Cylinder temperature profile	°C	160	-	200
	Die temperature profile	°C	190	-	200
	Tool/Roll temperature	°C	70	-	50

Notes

Drying of the product is recommended for 2-3 hours at 60-65°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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