

PRE-ELEC[®] PP 1353

PP concentrate
Electrically conductive

Applications: Monofilament
Raffia tape

PRE-ELEC[®] PP 1353 is a conductive thermoplastic concentrate based on polypropylene. Conductivity is achieved by using special conductive carbon black. It contains a high concentration of carbon black and has been developed to be used as a masterbatch. Dilution rate of 65% can be achieved depending on the required conductivity level. The actual amount should always be tested as it also depends on the processing parameters. Dilution with PP-H is recommended in fiber applications.

The values with the exception of MFR are measured from dilution: 50% PP-H, MFI 35 (230°C/2,16 kg)

Special properties	Unit	Value	Method
Volume resistivity(*)	Ω.cm	180	PRE021
Surface resistance (*)	Ω	1E+03	IEC 61340-2-3

General properties	Unit	Value	Method
Specific gravity	g/cm ³	1.11	ISO 1183
Melt flow rate at 230°C	g/10 min		ISO 1133
5.0 kg		0.3	
10.0 kg		9.0	
Mould shrinkage	%	1.2 - 1.4	ISO 294-4
Vicat, Rate A	°C	150	ISO 306/A50
Vicat, Rate B	°C	85	ISO 306/B50
HDT, 0.45 MPa	°C	78	ISO 75/Bf
HDT, 1.80 MPa	°C	54	ISO 75/Af

Mechanical properties	Unit	Value	Method
Tensile strength (*)	MPa	28	ISO 527
Tensile strain at break (*)	%	450	ISO 527
Flexural modulus	MPa	1300	ISO 178
Impact strength, Charpy	kJ/m ²		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		8	
Unnotched, -20°C		45	
Notched, -20°C		3	
Hardness, Shore A	-	> 90	ISO 868
Hardness, Shore D	-	75	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

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Processing instructions

	Unit	Processing range
Extrusion	Cylinder temperature profile	°C 200 - 220
	Die temperature profile	°C 210 - 220
	Tool/Roll temperature	°C 90 - 60

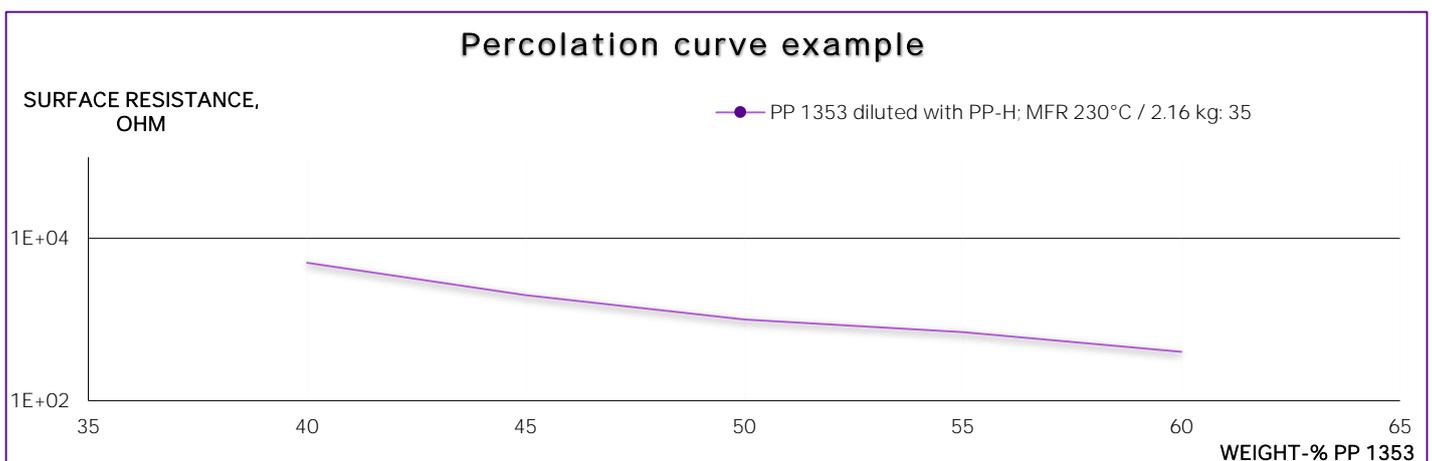
Notes

Drying of the product is recommended for 2-4 hours at 80-90°C prior to use.

Processing conditions as with filled PP. 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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