

Item Description

Item ID

PRE-ELEC[®] PE 1296
1296

PE-HD concentrate
Electrically conductive

Typical end product
Pipes, Canisters

Applications
Pails
Drums

PRE-ELEC[®] PE 1296 is a conductive thermoplastic concentrate based on PE-HD. Conductivity is achieved by using a special conductive carbon black. It contains a high load of carbon black and it can be diluted with virgin or recycled PE-HD to achieve the desired conductivity level. The actual amount should always be tested as it also depends on the processing conditions. It is suitable for extrusion and injection moulding.

The values with the exception of MFR and density are measured from dilution: 40% HDPE, MFI 9 (190°C/21.6 kg)

Special properties	Unit	Value	Method
Volume resistivity - See percolation curve	Ω.cm	30	PRE021
Surface resistance	Ω	<1E3	IEC 61340-2-3

General properties	Unit	Value	Method
Density	g/cm ³	1,12	ISO 1183
Melt flow rate at 190°C 21.6 kg	g/10 min	0,6	ISO 1133
Mould shrinkage	%	2.5 - 3.5	ISO 294-4
Vicat, Rate A	°C	130	ISO 306/A50
Vicat, Rate B	°C	73	ISO 306/B50
HDT, 0.45 MPa	°C	77	ISO 75/Bf
HDT, 1.80 MPa	°C	43	ISO 75/Af

Mechanical properties	Unit	Value	Method
Tensile strength	MPa	13	ISO 527
Yield strength	MPa	24	ISO 527
Tensile strain at break	%	40	ISO 527
Tensile strain at yield	%	12	ISO 527
Flexural modulus	MPa	1200	ISO 178
Impact strength, Charpy	kJ/m ²		ISO 179
Unnotched, +23°C		NB	
Notched, +23°C		65	
Unnotched, -20°C		NB	
Notched, -20°C		60	
Hardness, Shore A	-	> 90	ISO 868
Hardness, Shore D	-	65	ISO 868

MFR is measured from granulates.

Test specimen: injection moulded rod; ISO 527 TYPE 1A; Thickness: 10 mm, width: 4 mm

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Processing instructions

		Unit	Processing range
Extrusion	Cylinder temperature profile	°C	200 - 230
	Die temperature profile	°C	200 - 220
	Tool/Roll temperature	°C	70 - 50
Injection moulding	Material temperature	°C	210 - 250
	Mould temperature	°C	40 - 80
	Injection pressure	Bar	750 - 1200
	Injection speed		moderate

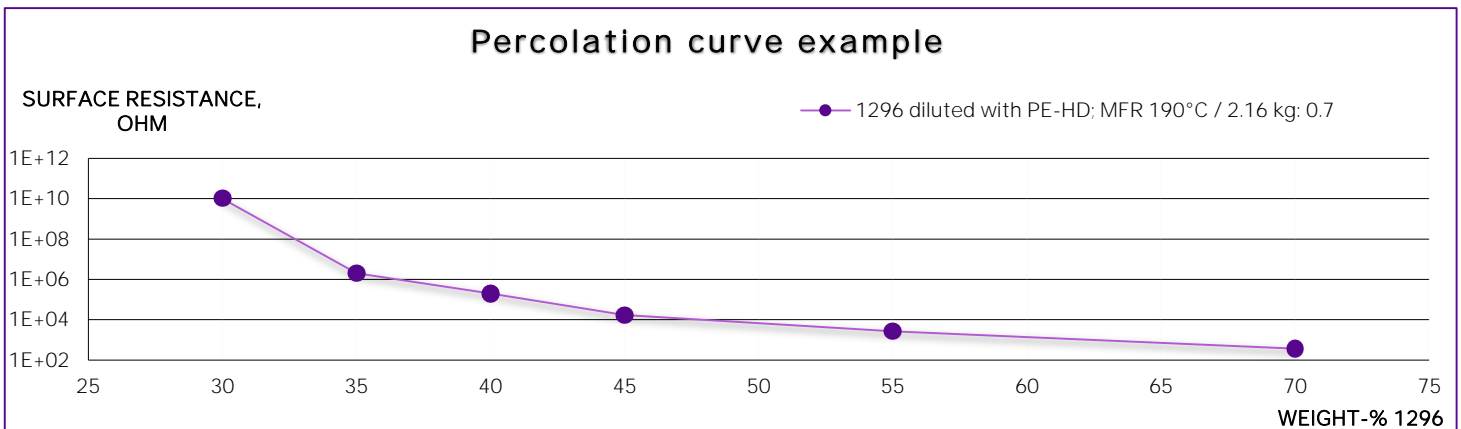
Notes

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.

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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