

# Item Description

## Item ID

TP14839

PE-HD injection moulding compound    Typical end product  
Electrically conductive                      Fuel filler necks and heads

Applications  
Automotive industry

PRE-ELEC® TP 14839 is a conductive thermoplastic compound based on high density polyethylene. A special grade of carbon black is used in this product, offering low electrical resistivity with good mechanical properties. It is well suited for injection moulding applications, but can also be used in extrusion and blow molding applications.

Special properties	Unit	Value	Method
Volume resistivity	$\Omega \cdot \text{cm}$	100	PRE021
Surface resistance	$\Omega$	<1E3	IEC 61340-2-3
General properties	Unit	Value	Method
Specific gravity	$\text{g/cm}^3$	1,04	ISO 1183
Melt flow rate at 190°C	$\text{g/10 min}$		ISO 1133
21.6 kg		16	
Mould shrinkage	%	2.5 - 3.5	ISO 294-4
Vicat, Rate A	°C	130	ISO 306/A50
Vicat, Rate B	°C	76	ISO 306/B50
HDT, 0.45 MPa	°C	72	ISO 75/Bf
HDT, 1.80 MPa	°C	48	ISO 75/Af
Mechanical properties	Unit	Value	Method
Tensile strength	MPa	26	ISO 527
Yield strength	MPa	26	ISO 527
Tensile strain at break	%	43	ISO 527
Tensile strain at yield	%	10	ISO 527
Flexural modulus	MPa	1000	ISO 178
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		
Injection moulding	Material temperature	°C	230	-	280
	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 60-80°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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