

PRE-ELEC[®] TP 12086

PS injection moulding compound
 Easy to injection mould
 Electrically conductive

Applications: Injection moulded technical parts
 Electronic component housings
 Static sensitive devices (SSD) housings

PRE-ELEC[®] TP 12086 is a conductive thermoplastic compound based on polystyrene. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity, it has excellent mechanical properties and is easy to injection mould.

Electrical properties	Unit	Typical value	Test method
Surface resistance	Ω	$< 10^3$	IEC 61340-2-3
Volume resistivity	$\Omega.cm$	< 100	PRE021

General properties	Unit	Typical value	Test method
Specific gravity	-	1.1	ISO 1183
Mould shrinkage	%	0.4-0.6	ISO 294-4
Melt flow index (* 200 °C / 5.0 kg 200 °C / 21.6 kg)	g/10 min	0.6 40	ISO 1133

Mechanical properties	Unit	Typical value	Test method
Tensile strength	MPa	18	ISO 527
Elongation at break	%	40	ISO 527
Yield strength	MPa	15	ISO 527
Elongation at yield	%	3	ISO 527
Flexural modulus	MPa	2000	ISO 178
Impact strength, Charpy			ISO 179
Unnotched, +23 °C	kJ/m ²	NB	
Notched, +23 °C	kJ/m ²	10	
Unnotched, -20 °C	kJ/m ²	50	
Notched, -20 °C	kJ/m ²	9	
Hardness			ISO 868
Shore A	-	> 90	
Shore D	-	75	

Thermal properties	Unit	Typical value	Test method
Vicat, Rate A	°C	90	ISO 306/A50
HDT, 0.45 MPa	°C	80	ISO 75/Bf
HDT, 1.8 MPa	°C	69	ISO 75/Af

Test specimen: injection moulded rod; Thickness: 10 mm, width: 4 mm

*) Measured from granulates

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We do not intentionally add or incorporate hazardous substances in our production. This product is REACH and RoHS compliant.

See Premix document center for more detailed information of our products and issues related to processing of conductive plastics

Processing instructions

	Unit	Value range
Injection moulding		
Material temperature	°C	200 - 260
Mould temperature	°C	30 - 70
Injection pressure	Bar	750 - 1200
Injection speed		moderate

Notes

Processed similar to filled PS. 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.

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