

PRE-ELEC® TPU 1511

Thermoplastic Polyurethane Elastomer

Premix Oy

Message:

PRE-ELEC® TPU 1511 is electrically conductive polyester based thermoplastic polyurethane (TPU) compound. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity PRE-ELEC® TPU 1511 has retained the excellent mechanical properties of the base elastomer.

PRE-ELEC® TPU 1511 has been developed for extrusion but it can also be injection moulded. Typical applications included extruded conveyor belts, sheets and injection moulded technical parts.

General Information			
Additive	Carbon black		
Features	Conductivity		
Uses	Conveyor belt repair		
	Conveyor accessories		
	Pipe fittings		
	Sheet		
Forms	Particles		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/10.0 kg)	2.0	g/10 min	ISO 1133
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shaw A	95		ASTM D2240, ISO 868
Shaw D	52		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield	33.0	MPa	ASTM D638, ISO 527-2
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4.00 mm	33.0	MPa	ISO 527-2
Tensile Elongation			
Yield	530	%	ASTM D638, ISO 527-2
Fracture	560	%	ASTM D638
Fracture, 4.00mm	> 560	%	ISO 527-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+4	ohms	ESD STM11.11, IEC 61340-2-3

Volume Resistivity	< 5.0E+2	ohms·cm	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 100	°C	
Drying Time	1.0 - 2.0	hr	
Processing (Melt) Temp	180 - 220	°C	
Mold Temperature	30.0 - 50.0	°C	
Injection Rate	Moderate-Fast		
Injection instructions			
Injection Pressure: Low to Medium			
Extrusion	Nominal Value	Unit	
Drying Temperature	80.0 - 100	°C	
Drying Time	1.0 - 2.0	hr	
Cylinder Zone 1 Temp.	170	°C	
Cylinder Zone 2 Temp.	180	°C	
Cylinder Zone 3 Temp.	190	°C	
Cylinder Zone 4 Temp.	200	°C	
Cylinder Zone 5 Temp.	210	°C	
Extrusion instructions			
Cylinder Zone 6: 210°C			

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