

PRE-ELEC® TPE 1504

Thermoplastic Elastomer

Premix Oy

Message:

PRE-ELEC® TPE 1504 is a highly conductive thermoplastic compound based on a thermoplastic elastomer (TPE). Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity, PRE-ELEC® TPE 1504 has retained the excellent mechanical properties of the base elastomer.

Typical applications include extruded profiles, sheets and injection moulded technical parts.

General Information			
Additive	Carbon black		
Features	Conductivity		
Uses	Sheet		
	Profile		
Forms	Particles		
Processing Method	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.11	g/cm ³	ASTM D792
--	1.10	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/10.0 kg)	18	g/10 min	ISO 1133
Molding Shrinkage			
Flow	1.6 - 1.8	%	ASTM D955
Flow direction	1.6 - 1.8	%	ISO 294-4

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	70		ASTM D2240, ISO 868

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
100% strain, 4.00mm	350	MPa	ASTM D638
200% strain, 4.00mm	460	MPa	ASTM D638
300% strain, 4.00mm	550	MPa	ASTM D638
100% strain, 4.00mm	2.40	MPa	ISO 527-2
200% strain, 4.00mm	3.20	MPa	ISO 527-2
300% strain, 4.00mm	3.90	MPa	ISO 527-2
Tensile Elongation			
Fracture	> 800	%	ASTM D638
Fracture, 4.00mm	> 800	%	ISO 527-2

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+5	ohms	ESD STM11.11, IEC 61340-2-3
Volume Resistivity	< 1.0E+2	ohms·cm	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	< 65.0	°C	
Drying Time	1.0 - 2.0	hr	
Processing (Melt) Temp	180 - 210	°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	< 65.0	°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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