

PRE-ELEC® ABS 1415

Acrylonitrile Butadiene Styrene

Premix Oy

Message:

PRE-ELEC® ABS 1415 is a conductive thermoplastic compound based on ABS. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity. PRE-ELEC® ABS 1415 has excellent mechanical properties and is easy to extrude. Typical applications include co-extruded multilayer sheets with natural HIPS, ABS or conductive or natural TPE.

General Information			
Additive	Carbon black		
Features	Conductivity		
	Workability, good		
Uses	Sheet		
Forms	Particles		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.08	g/cm ³	ASTM D792
--	1.10	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	2.5	g/10 min	ISO 1133
Molding Shrinkage			
Flow	0.50 - 0.80	%	ASTM D955
Flow direction	0.50 - 0.80	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	77		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Flow: Yield	40.0	MPa	ASTM D638, ISO 527-2
Across Flow	32.0	MPa	ASTM D638
Flow	32.0	MPa	ASTM D638
-- ¹	32.0	MPa	ISO 527-2
0.400 mm ²	32.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Flow: Yield	4.0	%	ISO 527-2
Fracture, 0.400mm ³	6.0	%	ISO 527-2
Fracture, 0.400mm ⁴	10	%	ISO 527-2
Flexural Modulus			
4.00 mm	1930	MPa	ASTM D790
4.00 mm	1900	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁵			
-20°C	15	kJ/m ²	ASTM D256, ISO 179
23°C	17	kJ/m ²	ISO 179, ASTM D256
Charpy Unnotched Impact Strength ⁶			
-20°C	No Break		ASTM D256
23°C	No Break		ISO 179, ASTM D256
Notched Izod Impact			
			ASTM D256
-20°C, 4.00 mm	8.41	kJ/m ²	ASTM D256
23°C, 4.00 mm	14.7	kJ/m ²	ASTM D256
Notched Izod Impact ⁷			
			ISO 180
-20°C	8.0	kJ/m ²	ISO 180
23°C	15	kJ/m ²	ISO 180
Unnotched Izod Impact			
			ASTM D256
-20°C, 4.00 mm	60.9	kJ/m ²	ASTM D256
23°C, 4.00 mm	No Break		ASTM D256
Unnotched Izod Impact Strength ⁸			
			ISO 180
-20°C	60	kJ/m ²	ISO 180
23°C	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	87.8	°C	ASTM D648B
0.45 MPa, not annealed	88.0	°C	ISO 75-2/Bf
1.8 MPa, not annealed	72.8	°C	ASTM D648A
1.8 MPa, not annealed	73.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	91.1	°C	ASTM D1525 ⁹
--	104	°C	ASTM D1525, ISO 306/A50 ^{7 10}
--	91.0	°C	ISO 306/B50
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+6	ohms	IEC 61340-2-3
Volume Resistivity	< 1.0E+5	ohms · cm	Internal method
Extrusion	Nominal Value	Unit	
Drying Temperature	80.0 - 100	°C	
Drying Time	2.0 - 4.0	hr	
Cylinder Zone 1 Temp.	200	°C	
Cylinder Zone 2 Temp.	210	°C	
Cylinder Zone 3 Temp.	220	°C	
Cylinder Zone 4 Temp.	230	°C	
Cylinder Zone 5 Temp.	240	°C	
Extrusion instructions			

NOTE

1.	.4 mm Thickness, Across Flow
2.	Flow
3.	Across Flow
4.	Flow
5.	4 mm thickness
6.	4 mm thickness
7.	4 mm thickness
8.	4 mm thickness
9.	标准 B (120°C/h), 载荷2 (50N)
10.	速率 A (50°C/h), 载荷2 (50N)

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

