PEI-1000 Properties

Parameter table

Property	Testing Items		Rated Value	Unit	Test Method
Physical Properties	Proportion		1.30	g/cm^3	ASTM D792
	Melt Flow Rate（295℃/6.6kg）		2.4	g/10min	ASTM D1238
	Shrinkage Rate	Flow:3.20mm	0.5-0.7	%	Internal Method
		Lateral Flow:3.20mm	0.5-0.7		
Mechanical Properties	Tensile Modulus		3310	Mpa	ASTM D638
	Tensile Strength		96.5	Mpa	ASTM D638
	Elongation		85	%	ASTM D638
	Flexural Modulus		3240	Mpa	ASTM D790
	Flexural Strength	Yield, 100mm Span	145	Mpa	ASTM D790
		Fracture, 100mm Span	141		
Impact Performance	Cantilever Beam Notched Impact Strength (23°C)		69	J/m	ASTM D256
	Reverse-Notch Impact (3.20 mm)		2100	J/m	ASTM D256
	Falling-weight Impact (23°C)		35.3	J	ASTM D3029
Thermal Properties	Heat Deflection Temperature Under Load (1.8 MPa, unannealed, 6.40 mm)		189	℃	ASTM D648
Flammability	FAA Flammability		SECT A-1		FAR 25.853
	Halogen Content		0		Internal method
	Total Heat Release Of OSU		10.0	KW min/m^2	FAR 25.853
	Vertical Burn Test	Test a(60s), passed	1.0	sec	FAR 25.853
		Test b(12s), passed	0.0		

★The numerical values are representative values, not standard values.

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PEI-G1030 Properties

Parameter table

Property	Testing items		Rated value	Unit	Test method
Physical Properties	Density		1.5	g/cm^3	ISO 1183
	Melt Volume-flow Rate（360℃/5.0kg）		6.00	cm^3/10min	ISO 1183
	Shrinkage Rate-flow		0.20-0.40	%	Internal Method
	Water Absorption Rate	Saturation, 23℃	0.90	%	ISO 62
		Balance, 23℃,50%RH	0.50		
Hardness	Ball Indentation Hardness (H 358/30)		165	Mpa	ISO 2039-1
Mechanical Properties	Tensile Modulus		9500	Mpa	ISO527-2/1
	Tensile Stress (at break)		165	Mpa	ISO527-2/5
	Tensile Strain (at break)		2.0	%	ISO527-2/5
	Flexural Modulus		8500	Mpa	ISO 178
	Bending Stress		225	Mpa	ISO 178
	Taber Abrasion Resistance (1000 cycles, 1000 g, CS-17 wheels)		20.0	mg	Internal Method
Impact Performance	Cantilever Beam Notched Impact Strength (23°C)		10	kJ/m^2	ISO179/2C
	Unnotched Charpy Impact Strength	-30°C	40	kJ/m^2	ISO/179/1eU
		23°C			
	Unnotched Izod Impact Strength	-30°C	40	kJ/m^2	ISO 180/1U
		23°C			
Thermal Properties	Heat Deflection Temperature	0.45 MPa, unannealed, 100 mm span	215	℃	ISO 75-2/Be
		1.8 MPa, unannealed, 100 mm span	210		ISO 75-2/Ae
	Vicat Softening Temperature		225	℃	ISO 306/A50
			213		ISO 306/B50
			220		ISO 306-8120
	Ball Pressure Test (125℃)		2.0E-5		IEC60695-10-2

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PEI-G1030 Properties

Parameter table

Property	Testing Items		Rated Value	Unit	Test Method
Thermal Properties	Coefficient Of Linear Thermal Expansion	Flow:23-150℃	6.0E-5	cm/cm/°C	ISO 11359-2
		Horizontal:23-150℃	pass		
	Thermal Conductivity		0.29	W/m/K	ISO 8302
	RTI Elec		180	℃	UL 746
	RTI Imp		170	℃	UL 746
Electrical Performance	Surface Resistivity		> 1.0E+15	Ohms	IEC 60093
	Volume Resistivity		1.0E+15	Ohms cm	IEC 60093
	Dielectric Strength	0.800 mm, in oil	35	KV/mm	IEC 60243-1
		1.60 mm, in oil	26	KV/mm	
		3.20 mm, in oil	15	KV/mm	
	Relative Permittivity	50Hz	3.30		IEC 60250
		60Hz	3.30		
		1MHz	3.10		
	Dissipation Factor	50Hz	1.6E-3		IEC 60250
		60Hz	1.6E-3		
		1MHz	2.3E-3		
		2.45GHz	5.3E-3		
	Comparative Tracking Index	-	150	V	IEC 60112
		Solution	100	V	
Flammability	UL Flame Retardant Rating	0.250mm	V-0		UL 94
		1.20mm	5VA		
	Glow Wire Flammability Index (3.20 mm)		960	℃	IEC 60695-2-12
	Limiting Oxygen Index		48	%	ISO 4589-2

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