PI-1002-2 Properties

Parameter table

Property	Test Items		Units	Test Methods	Temperature	Measured value
Mechanical Properties	Tensile Strength		MPa	D-1708	In liquid nitrogen 30 min	45.1
					-100℃	62.6
					23℃	92
					100℃	84
					150℃	70.5
					200℃	57.8
					260℃	42.1
	Elongation At Break		%	D-1708	In liquid nitrogen 30 min	7.2
					-100℃	9.5
					23℃	12.5
					100℃	23.5
					150℃	32.6
					200℃	30.2
					260℃	25.6
	Bending Strength		MPa	D-790	In liquid nitrogen 30 min	62.7
					-100℃	77.3
					23℃	112
					100℃	106
					150℃	100.2
					200℃	77.6
					260℃	57.6
	Flexural Modulus		MPa	D-790	In liquid nitrogen 30 min	1167
					-100℃	2261
					23℃	2976
					100℃	2543
					150℃	2230
					200℃	2080
					260℃	1763.8
	Compressive Strength	1%	MPa	D-695	23℃	8.96
		10%				111
	Compression Modulus		MPa	D-795	23℃	1930
	Notch Impact Strength		J/m	D-256	23℃	72
Friction And Wear	Coefficient of friction, PV=0.875 MPa·m/s		-	-	-	0.3
Thermal Performance	Thermal Weight Loss 5%		℃	TGA, N2, 20℃/min	-	572
	Melting Point And Tg Point		℃	DSC, N2, 20℃/min	50-450℃	-
	Linear Thermal Expansion		μm/m/℃	D-696	23℃-260℃	52
	Thermal Conductivity		W/(M·k)	E-1461	25℃	0.358
	Deflection Temperature, 264 Psi		℃	D-648	-	330
Electrical Property	Dielectric Constant	10^3hz		D-150	23℃	3.56
		10^6hz				3.45
	Dissipation Factor		-	D-150	23℃	0.0035
	Volume Resistivity		Ω·m	D-257	23℃	$>10^{12}$
	Surface Resistivity		Ω	D-257	23℃	$>10^{12}$
Other Performance	Water Absorption Rate	24h	%	D-570	23℃	0.21
	Proportion		-	D-792	-	1.43
	Oxygen Index		%	D-2863	-	52

★Note : This date is not a guaranteed value, but a typical value.

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PI-1003 Properties

Parameter table

Project	Numerical Value	Test Method
Density g/cm^3	1.40-1.45	GB/T1033.1
Glass Transition Temperature（℃）≥	330.0	DMA
Thermal Expansion Coefficient ℃-1 （25℃-200℃）	$1.0*10^{-5}$-$7.0*10^{-5}$	TMA
Notched Impact Strength（kj/m^2）≥	50.0	GB/T1043.1
Compressive Strength (Compression Ratio25%）≥	140.0	GB/T1041
Bending Strength（mpa）≥	110.0	GB/T9341
Tensile Strength（mpa）≥	70.0	GB-T1040.1
		GB/T1040.2
Shore Hardness （HD）≥	85	GB/T2411
Frictional Coefficient	0.25-0.35	GB/T3960
Relative Dielectric Constant（1mhz）	3.0-3.4	GB/T1409
Dielectric Loss Factor（1mhz）	$5.0*10^{-3}$-$2.0*10^{-2}$	GB/T1409
Electric Strength KJ/Mm ≥	22	GB/T1048.1
Volume Resistivity Ω·m ≥	$1.0*10^{15}$	GB/T1410
Water Absorption Rate % ≤	0.5	GB/T1034

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





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PI-1006 Properties

Parameter table

Testing Items	Testing Standards	Unit	Product Brand
			PI-1006
Appearance	-	-	Yellow Powder
Resin Characteristics	-	-	Amorphous
Real Density	GB1033	Kg/m^3	1400
Water Absorption Rate % ≤	GB1034	%	0.6
Tensile Strength	GB1040.1-2006	Mpa	80
Elongation	GB1040.1-2006	%	8
Bending Strength	GB9341-2000	Mpa	100
Flexural Modulus	GB/T9341-2000	Mpa	2500
Compressive Strength	GB/T1041-2008	Mpa	150
Charpy Impact Strength	GB/T16420-1996	KJ/m^2	80
Hardness	Shore D	-	85
Tg (N_2, 10℃/Min)	DSC(DSC204/1/F)	℃	250
T_d^5(air, 10℃/Min)	TGS(DTS449C/6/F)	℃	510
Tm (N_2, 10℃/Min)	DSC(DSC204/1/F)	℃	-
Linear Expansion Coefficient	GB/T2572-2005	℃	$4.5*10^{-5}$
Maximum Service Temperature	-	℃	230
Low Temperature Resistance	-	℃	-248
Dielectric Strength	GB1408	KV/mm	180
Surface Resistivity	GB1410	Ω	10^{-15}
Volume Wear Rate	GB3960	$m^3/(N \cdot m)$	10^{-16}
Frictional Coefficient	GB3960	-	0.2

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PI-1010 Properties

Parameter table

No.	Testing Items		Unit	Result	Experimental Methods
1	Density (23℃)		g/cm^3	1.365	GB/T1003.1-2008
2	Tensile Strength	23℃	Mpa	115	GB/T1040.2-2006
	Tensile Modulus			3.15*103	
	Tensile Fracture Strainkiffufl		%	13	
	Tensile Strength Kl#®®	220℃	Mpa	54	
3	Bending Strengthw®s®	23℃	Mpa	194	GB/T9431-2008
	Flexural Moduluswfttsw			3.44*103	
	Bending Strengthw®®®	220℃	Mpa	80.3	
	Flexural Modulusw®^w			1.67*103	
4	Compressive Strength At 25% Strain		Mpa	188	GB/T1041-2008
	Compression Modulus			2.52*103	
5	Impact Strength/4,s5§®(5ckn)		KJ/m^2	2.8*102	GB/T1043.1-2008
6	Ball Indentation Hardness		N/mm^2	234	GB/T3398.1-2008
7	Heat Distortion Temperature(1.8mpa)		℃	257	GB/T1634.2-2004
8	Frictional Coefficient		/	0.92	GB/T3960-2016
	Wear And Tear		mg	2.95	
9	Linear Expansion Coefficient	23-230℃	K-1	52.2*10^6	IOS11359-2:1999
10	Relative Permittivity	1MHz	/	3.3	GB/T1109-2006
	Dielectric Loss		/	2.6*10‘3	
11	Volume Resistivity		Ω· cm	1.31*1016	GB/T1410−2016
12	Breakdown Voltage		KV	33.59	GB/T1408.1−2016

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