PRESPEEK® – 880G

Test Item	Test Method	Conditions	Units	Test Data
Mechanical Data				
Tensile Strength	ISO 527	Break, 23℃	MPa	100
Tensile Elongation	ISO 527	Break, 23℃	%	40
Flexural Strength	ISO 178	Break, 23℃	MPa	170
Flexural Modulus	ISO 178	23℃	GPa	4.2
Compressive Strength	ISO 604	23℃	MPa	125
Charpy Impact Strength	ISO 179/1eA	Notched	kJ m^{-2}	7
	ISO 179/1U	Unnotched	kJ m^{-2}	-
Izod Impact Strength	ISO 180/A	Notched	kJ m^{-2}	6.5
	ISO 180/U	Unnotched	kJ m^{-2}	-
Mould Shrinkage	ISO 294-4	Along Flow	%	1
		Across Flow	%	1.3
Thermal Data				
Melting Point	ISO 11357	-	℃	343
Glass Transition (Tg)	ISO 11357	Onset	℃	143
Special Heat Capacity	DSC	23℃	kJ kg^{-1} $℃^{-1}$	2.2
Coefficient of Thermal Expansion	ISO 11359	Along flow below Tg	ppm K^{-1}	45
		Along flow above Tg	ppm K^{-1}	120
Heat Deflection Temperature	ISO 75	1.8 Mpa	℃	152
Thermal Conductivity	ISO 22007-4	23℃	W m^{-1} K^{-1}	0.29
Flow				
Melt Index	ISO 1133	380℃,5kg	g $10min^{-1}$	20
Miscellaneous				
Density	ISO 1183	Crystalline	gcm^{-3}	1.3
		Amorphous	gcm^{-3}	1.26
Shore D Hardness	ISO 868	23℃		85
Water Absorption（3.2mm thick Tensile Bar）（by immersion）	ISO 62	24h, 23℃	%	0.04
		Equilibrium, 23℃	%	0.3

Electrical Data

Dielectric Strength	IEC 60243-1	2mm	kV mm^{-1}	23
Comparative Tracking Index	IEC 60112	-	V	150
Dielectric Constant	IEC 60250	23℃, 1kHz	-	3.2
		23℃,50Hz	-	4.5
Loss Tangent	IEC 60250	23℃, 1MHz	-	0.003
Volume Resistivity	IEC 60093	23℃,1V	Ω cm	10^{16}
		275℃	Ω cm	10^{9}

Injection molding

Nozzle temperature			° C	390 (+-15)
Zone1 Temperature			° C	390 (+-15)
Zone2 Temperature			° C	380 (+-15)
Zone3 Temperature			° C	370(+-15)
Melt Temperature			° C	390 (+-15)
Mould Temperature			° C	175~205
Screw Speed			%	40-80
Back Pressure			Bar	4-12

Predrying

Drying temperature/time			-	150°C/3h or 120°C/ over 6h
Water absorption			%	<0.3