PRESPPS – GF40

Test Item	Test Method	Conditions	Units	Test Data
Mechanical Data				
Rockwell Hardness	ASTM D785	M-level	-	100
	ISO 2039-2	M-level	-	100
Tensile Modulus	ASTM D638	-40°C	MPa	14500
	ASTM D638	75°C	MPa	11900
	ASTM D638	150°C	MPa	4270
	ASTM D638	200°C	MPa	3240
	ISO 527-2/1A/1	23°C	MPa	14700
Tensile Strength	ASTM D638	Fracture, 23°C	MPa	200
	ISO 527-2/1A/5	Fracture	MPa	195
Tensile Elongation	ASTM D638	Fracture, 23°C	%	1.7
	ISO 527-2/1A/5	Fracture	%	1.9
Flexural Modulus	ISO 178	23°C	MPa	14500
Flexural Strength	ISO 178	23°C	MPa	285
Charpy Impact Strength	ISO 179/1eA	-30°C	kJ m^{-2}	10
	ISO 179/1eA	23°C	kJ m^{-2}	10
	ISO 179/1eU	-30°C	kJ m^{-2}	53
	ISO 179/1eU	23°C	kJ m^{-2}	53
Izod Impact Strength	ISO 180/1A	-30°C	kJ m^{-2}	10
	ISO 180/1A	23°C	kJ m^{-2}	10
	ISO 180/1U	23°C	kJ m^{-2}	34
Thermal Data				
Heat Deflection Temperature	ASTM D648	0.45 MPa, annealed	°C	280
	ASTM D648	1.8 MPa, unannealed	°C	265
	ISO 75-2/A	1.8 MPa, unannealed	°C	270
	ISO 75-2/C	8.0 MPa, unannealed	°C	215
Glass Transition (Tg)	ISO 11357-2	-	°C	90
Melting Point	ISO 11357-3	-	°C	280
Coefficient of Thermal Expansion	ISO 11359-2	MD	$°C^{-1}$	2.6E-5
	ISO 11359-2	TD	$°C^{-1}$	4.2E-5
Miscellaneous				
Density	ASTM D792, ISO 1183	-	g cm^{-3}	1.65
Specific Volume	ASTM D792	-	cm^3 g^{-1}	0.611

Mould Shrinkage	ASTM D955	MD	%	0.20 to 0.30
	ASTM D955	TD	%	0.50 to 0.70
	ISO 294-4	TD	%	0.40 to 0.60
	ISO 294-4	MD	%	0.20 to 0.60
Water Absorption	ISO 62	Saturation, 23°C	%	0.020
Specific Heat Capacity of Melt	Internal Method	-	$J\ kg^{-1}\ °C^{-1}$	1500
Specimen Thickness (Shrinkage)	Internal Method	-	mm	3.18
Electrical Data				
Surface Resistivity	IEC 60093	-	ohms	> 1.0E+15
Volume Resistivity	ASTM D257	-	Ω cm	1.0E+16
	IEC 60093	-	Ω cm	> 1.0E+15
Dielectric Strength	IEC 60243-1	-	$kV\ mm^{-1}$	28
Dielectric Constant	ASTM D150	1 kHz	-	3.50
	ASTM D150	1 MHz	-	3.50
	IEC 60250	1 MHz	-	4.60
Dissipation Factor	ASTM D150	1 kHz	-	1.0E-3
	ASTM D150	1 MHz	-	1.0E-3
	IEC 60250	1 MHz	-	6.2E-3
Arc Resistance	ASTM D495	-	sec	134
Comparative Tracking Index	IEC 60112	-	V	125
Flame Characteristics				
Flame Class Rating	UL 94	0.38 mm	-	V-0
	UL 94	1.50 mm	-	V-0
	UL 94	3.00 mm	-	5VA
Oxygen Index	ISO 4589-2	-	%	47