NOVADURAN®

Polybutylene Terephtalate Resin

Properties	Test Method	Terms	Units	Reinforced UL-HB type **5010F6X4** GF+Filler 40	 **5010GP20** Tracking Resistance GF+Filler 40
Physical properties					
Density	ISO 1183	-	g/cm^3	1.62	1.49
Water absorption	-	23degC, Underwater	%	0.08	0.07
Rheological properties					
Melt Mass-flow Rate Melt Volume-flow Rate	ISO 1133	 Temperature Load	g/10min cm^3/10min degC kg	15 11 250 2.16	12 10 250 2.16
Moulding shrinkage (1mmt)	-	MD TD	%	0.5 1.2	0.3 1.4
Moulding shrinkage (3mmt)	-	MD TD	%	0.8 1.6	0.4 1.6
Mechanical properties					
Tensile modulus Yield stress Yield strain Nominal strain at break Stress at 50% strain Stress at break Strain at break	ISO 527-1 , 527-2	-	MPa % MPa %	7700 - - - - 77 1.8	9000 - - - - 99 2.0
Flexural strength Flexural modulus	ISO 178	-	MPa	110 7500	150 8900
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m^2	22	32
Charpy notched impact strength		23 degC	kJ/m^2	5	8
Thermal properties					
Melting temperature	ISO 11357-3		degC	224	224
Temperature of deflection under load	ISO 75-1 , 75-2	1.80MPa 0.45MPa	degC	184 212	192 218
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	4.E-05 8.E-05	3.E-05 6.E-05
Flammability	UL94	0.4mmt	-	-	-
Flammability	UL94	0.8mmt	-	HB	-
Flammability	UL94	1.6mmt	-	-	-
Flammability	UL94	3.2mmt	-	-	-
GWFI(Glow-wire flammability test method for materials)	IEC 60695-2-12	3.0mmt	-	-	-
GWIT(Glow-wire ignitability test method for materials)	IEC 60695-2-13	3.0mmt	-	-	-
Electrical properties					
Relative permittivity	IEC 60250	1MHz	-	3.5	3.6
Dissipation factor	IEC 60250	1MHz	-	0.016	0.012
Volume resistivity	IEC 60093	-	ohm-m	1.E+14	1.E+14
Surface resistivity	IEC 60093	-	ohm	1.E+15	1.E+15
Electric strength	IEC 60243-1	1mmt 2mmt 3mmt	MV/m	30 25 -	43 - -
Comparative tracking index	UL746A	-	-	-	-