

NOVADURAN®

Polybutylene Terephthalate Resin

				GF Reinforced Alloy					
Properties	Test Method	Terms	Units	5810G15	5810G30	5820G30	5810G40	5810F40	5820G40H
				Low Warpage	Low Warpage	Low Warpage	Low Warpage	Low Warpage	Low Warpage High Strength
				GF	GF	GF	GF	GF	GF
				30	30	30	30	30	30
Physical properties									
Density	ISO 1183	-	g/cm ³	1.29	1.44	1.44	1.53	1.52	1.58
Water absorption	-	23degC, Underwater	%	0.08	0.08	0.07	0.08	0.08	0.07
Rheological properties									
Melt Mass-flow Rate	ISO 1133	Temperature Load	g/10min	20	12	11	9	12	8
Melt Volume-flow Rate			cm ³ /10min	15	10	9	6	10	5
			degC	250	250	250	250	250	250
			kg	2.16	2.16	2.16	2.16	2.16	2.16
Moulding shrinkage (1mmt)	-	MD	%	0.2	0.1	0.1	0.1	0.2	0.1
		TD		0.5	0.5	0.5	0.5	0.4	0.5
Moulding shrinkage (3mmt)	-	MD	%	0.3	0.2	0.2	0.2	0.3	0.2
		TD		0.7	0.6	0.6	0.6	0.5	0.8
Mechanical properties									
Tensile modulus	ISO 527-1 , 527-2	-	MPa	6000	9400	10500	12000	10000	12500
Yield stress			-	-	-	-	-	-	-
Yield strain			%	-	-	-	-	-	-
Nominal strain at break			-	-	-	-	-	-	-
Stress at 50% strain			MPa	-	-	-	-	-	-
Strain at break			%	90	120	130	125	100	160
				2.5	1.8	1.9	1.8	1.8	2.1
Flexural strength	ISO 178	-	MPa	135	185	190	195	160	240
Flexural modulus				5500	8600	9400	10500	9500	11500
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m ²	50	59	45	60	40	50
Charpy notched impact strength		23 degC	kJ/m ²	9	10	8	11	7	9
Thermal properties									
Melting temperature	ISO 11357-3		degC	224	224	224	224	224	224
Temperature of deflection under load	ISO 75-1 , 75-2	1.80MPa 0.45MPa	degC	170 195	180 215	180 215	190 215	185 200	205 220
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	3.E-05 9.E-05	3.E-05 8.E-05	4.E-05 8.E-05	4.E-05 6.E-05	5.E-05 6.E-05	3.E-05 8.E-05
Flammability	UL94	0.4mmt	-	-	-	-	-	-	-
Flammability	UL94	0.8mmt	-	-	-	-	-	-	-
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	-	3.2	3.2	3.2	3.2	3.2	3.3
Dissipation factor	IEC 60250	1MHz	-	0.017	0.017	0.017	0.017	0.017	0.017
Volume resistivity	IEC 60093	-	ohm-m	1.E+14	1.E+14	1.E+14	1.E+14	1.E+14	1.E+14
Surface resistivity	IEC 60093	-	ohm	1.E+15	1.E+15	1.E+15	1.E+15	1.E+15	1.E+15
Electric strength	IEC 60243-1	1mmt		0	40	40	40	40	32
		2mmt	MV/m	20	30	30	30	30	26
		3mmt		-	-	-	-	-	-
Comparative tracking index	UL746A	-	-	-	-	-	-	-	-

The listed properties are portrayed as general information only and are not product specifications.
Mitsubishi Engineering-Plastics disclaims any liability in connection with the use of the information in