

NOVADURAN®

Polybutylene Terephthalate Resin

Polybutylene Terephthalate Resin				GF Reinforced UL-HB type			
Properties	Test Method	Terms	Units	5010G15	5010G30	5010G45	5010G30X4
				Standards	Standards	Standards	
				GF	GF	GF	GF
				15	30	45	30
Physical properties							
Density	ISO 1183	-	g/cm³	1.41	1.52	1.67	1.52
Water absorption	-	23degC, Underwater	%	0.08	0.07	0.06	0.07
Rheological properties							
Melt Mass-flow Rate	ISO 1133	Temperature Load	g/10min	29	20	8	20
Melt Volume-flow Rate			cm³/10min	23	15	5	15
			degC	250	250	250	250
			kg	2.16	2.16	2.16	2.16
Moulding shrinkage (1mmt)	-	MD	%	0.5	0.2	0.1	0.2
		TD		1.0	0.7	0.6	0.7
Moulding shrinkage (3mmt)	-	MD	%	0.7	0.3	0.2	0.3
		TD		1.3	1.0	0.9	1.0
Mechanical properties							
Tensile modulus	ISO 527-1, 527-2	-	MPa	5800	9500	15000	9500
Yield stress			-	-	-	-	
Yield strain			%	-	-	-	-
Nominal strain at break			-	-	-	-	-
Stress at 50% strain			MPa	-	-	-	-
Stress at break	ISO 178	-	MPa	100	130	150	130
Strain at break			%	2.7	2.7	2	2.7
Flexural strength	ISO 178	-	MPa	150	210	250	210
Flexural modulus				5600	8900	15000	8900
Charpy impact strength	ISO 179-1, 179-2	23 degC	kJ/m²	24	59	60	59
Charpy notched impact strength		23 degC	kJ/m²	5	10	11	9
Thermal properties							
Melting temperature	ISO 11357-3		degC	224	224	224	22
Temperature of deflection under load	ISO 75-1, 75-2	1.80MPa 0.45MPa	degC	191 210	202 220	208 221	205 220
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	6.E-05 9.E-05	3.E-05 7.E-05	3.E-05 6.E-05	3.E-05 7.E-05
Flammability	UL94	0.4mmt	-	-	-	-	-
Flammability	UL94	0.8mmt	-	HB	HB	-	HB
Flammability	UL94	1.6mmt	-	HB	HB	-	HB
Flammability	UL94	3.2mmt	-	HB	HB	-	HB
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	3.4	3.4	3.4
Dissipation factor	IEC 60250	1MHz	-	0.020	0.016	0.016	0.016
Volume resistivity	IEC 60093	-	ohm-m	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
Electric strength	IEC 60243-1	1mmt		24	27	28	27
		2mmt	MV/m	21	24	25	25
		3mmt		-	-	-	-
Comparative tracking index		UL746A	-	-	-	PLC 1	-

The listed properties are portrayed as general information only and are not product specifications.

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