

NOVADURAN®

Polybutylene Terephthalate Resin

Polybutylene Terephthalate Resin				GF Reinforced Flame Retardant			
Properties	Test Method	Terms	Units	5010GN1-15AM	5010GN1-30AM	5010GN6-15M4	5010GN6-30M4
				-	-		
				GF	GF	GF	GF
				15	30	15	30
Physical properties							
Density	ISO 1183	-	g/cm ³	1.54	1.61	1.54	1.61
Water absorption	-	23degC, Underwater	%	0.08	0.07	0.08	0.08
Rheological properties							
Melt Mass-flow Rate	ISO 1133	Temperature Load	g/10min	18	13	24	18
Melt Volume-flow Rate			cm ³ /10min	13	9	19	14
			degC	250	250	250	250
			kg	2.16	2.16	2.16	2.16
Moulding shrinkage (1mmt)	-	MD	%	0.5	0.2	0.5	0.3
		TD		1.0	0.7	1.0	0.8
Moulding shrinkage (3mmt)	-	MD	%	0.4	0.3	0.5	0.3
		TD		1.4	1.3	1.5	1.3
Mechanical properties							
Tensile modulus	ISO 527-1, 527-2	-	MPa	6700	11000	6000	11000
Yield stress			-	-	-	-	
Yield strain			%	-	-	-	-
Nominal strain at break			-	-	-	-	
Stress at 50% strain			MPa	-	-	-	
Stress at break	ISO 178	-	MPa	100	130	100	140
Strain at break			%	2.1	2.0	2.1	1.9
Flexural strength	ISO 178	-	MPa	160	200	160	210
Flexural modulus				6500	10000	5800	9800
Charpy impact strength	ISO 179-1, 179-2	23 degC	kJ/m ²	25	49	24	48
Charpy notched impact strength		23 degC	kJ/m ²	5	8	5	9
Thermal properties							
Melting temperature	ISO 11357-3		degC	224	224	224	224
Temperature of deflection under load	ISO 75-1, 75-2	1.80MPa 0.45MPa	degC	192 212	205 220	193 214	205 220
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	4.E-05 8.E-05	3.E-05 6.E-05	4.E-05 8.E-05	3.E-05 6.E-05
Flammability	UL94	0.4mmt	-	-	-	-	-
Flammability	UL94	0.8mmt	-	V-0	V-0	V-0	V-0
Flammability	UL94	1.6mmt	-	V-0	V-0	V-0	V-0
Flammability	UL94	3.2mmt	-	V-0	V-0	V-0	V-0
GWFI(Glow-wire flammability test method for materials)	IEC 60695-2-12	3.0mmt	-	equal to 960degC	equal to 960degC	equal to 960degC	equal to 960degC
GWIT(Glow-wire ignitability test method for materials)	IEC 60695-2-13	3.0mmt	-	equal to 700degC	equal to 725degC	equal to 725degC	equal to 725degC
Electrical properties							
Relative permittivity	IEC 60250	1MHz	-	3.7	3.6	3.1	3.6
Dissipation factor	IEC 60250	1MHz	-	0.017	0.015	0.015	0.015
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	MV/m	23	24	23	24
		2mmt		-	-	-	-
		3mmt		-	-	-	-
Comparative tracking index	UL746A	-	-	PLC 3	PLC 3	PLC 3	-

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

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