

Properties				GF Reinforced toughnes UL-HB type				
				5010GT15	5010GT30	5010GT15X	5010GT30X2	5010GT30-8M
				Toughness	Toughness			Toughness
				GF	GF	GF	GF	GF
				15	30	15	30	30
Physical properties								
Density	ISO 1183	-	g/cm³	1.40	1.51	1.39	1.50	1.51
Water absorption	-	23degC, Underwater	%	0.09	0.08	0.09	0.08	0.08
Rheological properties								
Melt Mass-flow Rate	ISO 1133	Temperature Load	g/10min	24	12	5	4	8
Melt Volume-flow Rate			cm³/10min	20	9	4	3	6
			degC	250	250	250	250	250
			kg	2.16	2.16	2.16	2.16	2.16
Moulding shrinkage (1mmt)	-	MD	%	0.5	0.2	0.5	0.3	0.2
		TD		1.1	0.8	1.1	0.8	0.8
Moulding shrinkage (3mmt)	-	MD	%	0.7	0.3	0.8	0.4	0.3
		TD		1.3	1.0	1.4	1.1	1.1
Mechanical properties								
Tensile modulus	ISO 527-1 , 527-2	-	MPa	5600	9000	5300	8700	7300
Yield stress			-	-	-	-	-	
Yield strain			%	-	-	-	-	-
Nominal strain at break			-	-	-	-	-	
Stress at 50% strain			MPa	-	-	-	-	
Stress at break				93	110	80	100	100
Strain at break			%	2.5	2.8	2.9	2.9	4.0
Flexural strength	ISO 178	-	MPa	130	190	130	170	170
Flexural modulus			5500	8600	5200	8300	7300	
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m²	32	60	62	62	64
Charpy notched impact strength		23 degC	kJ/m²	6	9	11	11	9
Thermal properties								
Melting temperature	ISO 11357-3		degC	224	224	224	224	220
Temperature of deflection under load	ISO 75-1 , 75-2	1.80MPa 0.45MPa	degC	180 207	188 210	170 200	175 205	190 210
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	6.E-05 9.E-05	3.E-05 7.E-05	7.E-05 9.E-05	4.E-05 7.E-05	3.E-05 6.E-05
Flammability	UL94	0.4mmt	-	-	-	-	-	-
Flammability	UL94	0.8mmt	-	-	-	-	-	-
Flammability	UL94	1.6mmt	-	HB	HB	HB	HB	HB
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	3.4	3.2	3.4	3.4
Dissipation factor	IEC 60250	1MHz	-	0.020	0.016	0.020	0.016	0.016
Volume resistivity	IEC 60093	-	ohm-m	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
Electric strength	IEC 60243-1	1mmt		24	30	24	30	27
		2mmt	MV/m	21	24	21	24	24
		3mmt		-	-	-	-	-
Comparative tracking index	UL746A	-	-	-	-	-	-	-

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