

Properties	Test Method	Terms	Units	GF Reinforced Alloy
				5810G30
				Low Warpage Low Density Laser Welding
				GF30
Physical properties				
Density	ISO 1183	–	g/cm ³	1.44
Dimensional properties				
Moulding shrinkage (2mmt)	–	MD TD	%	0.3 0.6
Rheological properties				
Melt Volume flow Rate	ISO 1133	–	cm ³ /10min –	30 250°C × 5kg
Mechanical properties				
Yield stress	ISO 527-1,2	–	MPa	–
Stress at break	ISO 527-1,2	–	MPa	120
Strain at break		–	%	2
Flexural strength	ISO 178	–	MPa	185
Flexural modulus		–	MPa	9,000
Charpy impact	ISO 179-1, 2	–	kJ/m ² kJ/m ²	59
		notched		10
Thermal properties				
Melting temperature	ISO 11357-3	–	°C	224
Temperature of deflection under load	ISO 75-1, 2	1.80MPa	°C	185
		0.45MPa		>200
Coefficient of Linear thermal expansion	ISO 11359-2	MD: -30~120°C	1E-5/°C	2.0
		MD: -30~35°C		2.0
		MD: 35~120°C		2.0
		TD: -30~120°C		10.4
		TD: -30~35°C		8.3
		TD: 35~120°C		11.9
Flammability	UL94	–	–	HB(0.75mmt)
Electrical properties				
Volume resistivity	IEC 60093	–	Ω·m	>1E12
Surface resistivity	IEC 60093	–	Ω	>1E14
Electric strength	IEC 60243-1	1mmt	MV/m	40
		2mmt		30
		3mmt		–
CTI	UL746A	–	–	–
RTI(Elec)	UL746B	–	–	–
RTI(Imp)	UL746B	–	–	–
RTI(Str)	UL746B	–	–	–
Molding Conditions (Standard example)				
Pre-drying Temperature	–	–	°C	120
Pre-drying Time	–	–	h	5–8
Cylinder temperature	–	–	°C	240–265
Mold temperature	–	–	°C	50–90
Injection speed	–	–	–	Middle–High
Injection pressure	–	–	MPa	20–150
Screw speed	–	–	rpm	80–150

The values described are typical values only.