

Dupilon

Polycarbonate Resin

Properties	Test Method	Terms	Units	Glass Fiber Reinforced			
				GS2010MR2	GS2020MR2	GS2030MR2	GS2040MR2
				GF	GF	GF	GF
				10%	20%	30%	40%
				-	-	-	-
Physical properties							
Density	ISO 1183	-	g/cm ³	1.27	1.35	1.43	1.52
Water absorption		23degC, 50%RH 23degC, Underwater	%	- 0.14	- 0.11	- 0.09	- 0.08
Rheological properties							
Melt Mass-flow Rate	ISO 1133	Temperature	g/10min	8.8	8.5	5.7	3.7
Melt Volume-flow Rate			cm ³ /10min	8.2	8.0	4.8	2.7
			degC	300	300	300	300
			Load	kgf	1.20	1.20	1.20
Moulding shrinkage (3.2mmt)	-	MD TD	%	0.3 - 0.5 0.4 - 0.6	0.1 - 0.3 0.3 - 0.5	0.05 - 0.25 0.25 - 0.45	0.05 - 0.25 0.2 - 0.4
Mechanical properties							
Tensile modulus	ISO 527-1 , 527-2	-	MPa	4400	6200	8900	11700
Yield stress			-	-	-	-	
Yield strain			%	-	-	-	-
Nominal strain at break			-	-	-	-	
Stress at 50% strain			MPa	-	-	-	-
Stress at break			82	104	114	139	
Strain at break	%	2.9	2.7	2.5	2.1		
Flexural strength	ISO 178	-	MPa	130	160	190	226
Flexural modulus				3900	5800	8000	10800
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m ²	51	64	60	68
Charpy notched impact strength		23 degC	kJ/m ²	10	14	16	20
Thermal properties							
Temperature of deflection under load	ISO 75-1 , 75-2	1.80MPa 0.45MPa	degC	138 145	141 146	145 148	144 149
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	4.0E-05 6.7E-05	2.6E-05 6.3E-05	1.8E-05 6.3E-05	1.5E-05 6.1E-05
Flammability	UL94	-	-	-	-	-	-
Electrical properties							
Relative permittivity	IEC 60250	100Hz 1MHz	-	- -	- -	3.6 3.5	- -
Dissipation factor	IEC 60250	100Hz 1MHz	-	- -	- -	0.0011 0.0084	- -
Volume resistivity	IEC 60093	-	ohm-m	-	-	2E+14	-
Surface resistivity	IEC 60093	-	ohm	-	-	2E+15	-
Electric strength	IEC 60243-1	1mmt 2mmt 3mmt	MV/m	- - -	- - -	32 - 20	- - -
Comparative tracking index (CTI)	UL746A	-	-	same as 3	same as 3	same as 4	same as 4
				GSH2010R2 (HB 0.4mm)	GSH2020R2 (HB 0.4mm)	GSH2030R2 (HB 0.4mm)	

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

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