

Oupilon

Polycarbonate Resin

Properties	Test Method	Terms	Units	Glass Fiber Reinforced (For Camera)					
				GS2010MLR Y082	GS2020MLR Y083	GSH2020TR	GS2010MDR 9911A	GS2020MDR 9913A	
				Good Surface Easy Coating	Good Surface Easy Coating	Good Surface Easy Coating	Good Surface Easy Coating	Good Surface Easy Coating	
				GF	GF	GF	GF	GF	
				10%	20%	20%	10%	20%	
Physical properties									
Density	ISO 1183	-	g/cm ³	1.27	1.35	1.35	1.27	1.35	
Water absorption		23degC, 50%RH 23degC, Underwater	%	- 0.14	- 0.11	- 0.11	- 0.14	- 0.11	
Rheological properties									
Melt Mass-flow Rate	ISO 1133	Temperature	g/10min	17	9.2	9.5	16	7.6	
Melt Volume-flow Rate			cm ³ /10min	15	7.9	8.2	14	6.5	
			degC	300	300	300	300	300	
		Load	kgf	1.20	1.20	1.20	1.20	1.20	
Moulding shrinkage (3.2mmt)	-	MD TD	%	0.3 - 0.5 0.3 - 0.5	0.1 - 0.3 0.3 - 0.5	0.1 - 0.3 0.3 - 0.5	0.3 - 0.5 0.3 - 0.5	0.1 - 0.3 0.3 - 0.5	
Mechanical properties									
Tensile modulus	ISO 527-1 , 527-2	-	MPa	3300	6000	5800	3500	6200	
Yield stress			-	-	-	-	-	-	
Yield strain			%	-	-	-	-	-	
Nominal strain at break			-	-	-	-	-	-	
Stress at 50% strain			MPa	-	-	-	-	-	
Stress at break				60	85	89	63	86	
Strain at break			%	4.6	2.3	3.0	3.5	2.2	
Flexural strength	ISO 178	-	MPa	102	146	135	105	149	
Flexural modulus				2800	4900	5100	2900	5500	
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m ²	94	49	40	64	43	
Charpy notched impact strength		23 degC	kJ/m ²	6	8	7	7	9	
Thermal properties									
Temperature of deflection under load	ISO 75-1 , 75-2	1.80MPa 0.45MPa	degC	124 132	133 137	133 137	129 139	136 140	
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	5.0E-05 5.9E-05	3.0E-05 6.0E-05	3.0E-05 6.0E-05	5.0E-05 5.9E-05	3.0E-05 6.2E-05	
Flammability	UL94	-	-	-	-	HB(0.4mm)	-	-	
Electrical properties									
Relative permittivity	IEC 60250	100Hz 1MHz	-	-	-	-	-	-	
Dissipation factor	IEC 60250	100Hz 1MHz	-	-	-	-	-	-	
Volume resistivity	IEC 60093	-	ohm-m	-	-	-	-	-	
Surface resistivity	IEC 60093	-	ohm	-	-	-	-	-	
Electric strength	IEC 60243-1	1mmt 2mmt 3mmt	MV/m	-	-	-	-	-	
Comparative tracking index (CTI)	UL746A	-	-	same as 3	same as 3	same as 3	same as 3	same as 3	
				GSH2010LR (HB 0.4mm)	GSH2020LR (HB 0.4mm)		GSH2010DR (HB 0.4mm)	GSH2020DR (HB 0.4mm)	

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

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