

Oupital

Polyacetal Resin

Properties	Test Method	Terms	Units	Reinforced/Filled				
				FG2025	MF3020	FB2025	FC2020D	FC2020H
				Glassfiber Reinforced	Milledfiber Reinforced	Glassbead Filled	Electro-Conductive	High Rigidity
				Glassfiber 25%	Milledfiber 20%	-	Carbonfiber 20%	Carbonfiber 20%
Physical properties								
Density	ISO 1183	-	g/cm ³	1.59	1.55	1.59	1.46	1.46
Water absorption	-	23degC, 60%RH	%	0.20	0.20	0.20	0.36	0.28
Rheological properties								
Melt Mass-flow Rate	ISO 1133	Temperature	g/10min	9.0	20	5.0	3.5	6.0
Melt Volume-flow Rate			cm ³ /10min	6.3	15	3.8	3.2	5.4
			degC	190	190	190	190	190
			kg	2.16	2.16	2.16	2.16	2.16
Moulding shrinkage (3mmt)	-	MD	%	0.6	1.7	1.6	0.4	0.4
		TD		-	-	-	-	-
Mechanical properties								
Tensile modulus	ISO 527-1, 527-2	-	MPa	10000	4500	4000	17000	17000
Yield stress			-	-	-	-	-	
Yield strain			%	-	-	-	-	
Nominal strain at break			-	-	-	-	-	
Stress at break			MPa	140	60	60	130	170
Strain at break	%	3.0	4.0	6.0	1.5	2.0		
Flexural strength	ISO 178	-	MPa	210	100	100	200	270
Flexural modulus			9100	3900	3700	16000	16000	
Charpy impact strength	ISO 179-1, 179-2	23 degC	kJ/m ²	60	40	60	30	50
Charpy notched impact strength		23 degC	kJ/m ²	9.0	4.0	4.0	4.5	7.0
Thermal properties								
Melting temperature	ISO 11357-3		degC	166	166	166	166	166
Temperature of deflection under load	ISO 75-1, 75-2	1.80MPa 0.45MPa	degC	162 164	118 160	115 158	162 164	162 164
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	3.0E-05 1.1E-04	- -	- -	- -	1.5E-05 1.1E-04
Flammability	UL94	0.8mmt	-	HB	HB	HB	HB	HB
Electrical properties								
Relative permittivity	IEC 60250	100Hz	-	4.1	-	-	-	-
		1MHz	-	4.1	-	-	-	-
Dissipation factor	IEC 60250	100Hz	-	0.003	-	-	-	-
		1MHz	-	0.008	-	-	-	-
Volume resistivity	IEC 60093	-	ohm-m	1.E+12	-	-	2.E+00	2.E+03
Surface resistivity	IEC 60093	-	ohm	1.E+16	-	-	2.E+02	5.E+05
Electric strength	IEC 60243-1	1mmt	MV/m	25	-	-	-	-
		3mmt		16	-	-	-	-
Comparative tracking index	IEC 60112	-	-	600	-	-	-	-

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

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