



Polycarbonate Resin

Properties	Test Method	Terms	Units	Light Diffusion					
				DS3002R 7011A	DS3002R 7031A	DS3002R 7051A	DH3002R 7000A	EFD2110U	EFD2230U
				Light Diffusion Low class	Light Diffusion Medium class	Light Diffusion High class	Light Diffusion	Light Diffusion Low class Extrusion	Light Diffusion High class Extrusion
				-	-	-	-	-	-
Physical properties									
Density	ISO 1183	-	g/cm ³	1.20	1.20	1.20	1.20	1.20	1.20
Water absorption		23degC, 50%RH 23degC, Underwater	%	- 0.24	- 0.24	- 0.24	- 0.24	- 0.24	- 0.24
Rheological properties									
Melt Mass-flow Rate	ISO 1133	Temperature	g/10min	19	19	19	30	4	4
Melt Volume-flow Rate			cm ³ /10min	19	19	19	28	4	4
			degC	300	300	300	300	300	300
			kgf	1.20	1.20	1.20	1.20	1.20	1.20
Moulding shrinkage (3.2mmt)	-	MD TD	%	0.5 - 0.7 0.5 - 0.7	0.5 - 0.7 0.5 - 0.7	0.5 - 0.7 0.5 - 0.7	0.5 - 0.7 0.5 - 0.7	0.5 - 0.7 0.5 - 0.7	0.5 - 0.7 0.5 - 0.7
Mechanical properties									
Tensile modulus	ISO 527-1 , 527-2	-	MPa	2500	2500	2500	2400	2300	2400
Yield stress			59	59	59	62	65	66	
Yield strain			%	6.5	6.5	6.5	6.6	7	6
Nominal strain at break			115	112	101	110	100	100	
Stress at 50% strain			MPa	-	-	-	-	-	-
Stress at break	MPa	-	-	-	-	-	-		
Strain at break	%	-	-	-	-	-	-		
Flexural strength	ISO 178	-	MPa	89	89	89	93	92	97
Flexural modulus			2300	2300	2300	2300	2200	2300	
Charpy impact strength	ISO 179-1 , 179-2	23 degC	kJ/m ²	NB	NB	NB	NB	NB	NB
Charpy notched impact strength		23 degC	kJ/m ²	9	9	8	8	17	13
Thermal properties									
Temperature of deflection under load	ISO 75-1 , 75-2	1.80MPa 0.45MPa	degC	124 136	123 136	121 134	122 136	122 136	123 136
Coefficient of Linear thermal expansion	ISO 11359-2	MD TD	1/degC	6.5E-05 6.6E-05	6.5E-05 6.6E-05	6.5E-05 6.6E-05	6.5E-05 6.6E-05	6.5E-05 6.6E-05	6.5E-05 6.6E-05
Flammability	UL94	-	-	V-2(0.4mm)	V-2(0.4mm)	V-2(0.4mm)	-	V-0(1.2mm)	V-0(1.5mm)
Electrical properties									
Relative permittivity	IEC 60250	100Hz 1MHz	-	-	-	-	-	-	-
Dissipation factor	IEC 60250	100Hz 1MHz	-	-	-	-	-	-	-
Volume resistivity	IEC 60093	-	ohm-m	3E+14	3E+14	3E+14	3E+14	3E+14	3E+14
Surface resistivity	IEC 60093	-	ohm	6E+15	6E+15	6E+15	6E+15	6E+15	6E+15
Electric strength	IEC 60243-1	1mmt	MV/m	-	-	-	-	-	-
		2mmt	MV/m	-	-	-	-	-	-
		3mmt	MV/m	-	-	-	-	-	-
Comparative tracking index (CTI)	UL746A	-	-	2	2	2	-	-	-

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