IH830 Series (Heat Resistance Grade)

LG MMA

Properties	Test Method	Condition	Unit	IH830	IH830A	IH830C	IH830CA	IH830G	IH830H	IH830HR	IH830S	IH830U	IH830U7
Physical Properties													
Specific Gravity	ASTM D792	-	-	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18
Total Light Transmittance	ASTM D1003	3.2mm	%	93	93	93	93	93	93	92.7	93	92	93
Refractive Index	ASTM D542	nd	-	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
HAZE	ASTM D1003	3.2mm	%	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Water Absorption	ASTM D570	24h	%	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Thermal Properties													
Flow Index	ASTM D1238	3.8Kg,230℃	g/10min	2.5	5.3	2	1.1	1.7	2.5	1.4	0.8	2.7	2.2
VICAT Softening Point	ASTM D1525	1 kg	°F	235	227	235	235	235	235	252	235	235	235
			℃	113	108.5	113	112.5	113	113	122	113	113	113
Coefficient of Linear Expansion	ASTM D696	-	mm/mm/℃	6×10^{-5}	6×10^{-5}	6×10^{-5}	6×10^{-5}	6×10^{-5}	6×10^{-5}	6×10^{-5}	6×10^{-5}	6×10^{-5}	6×10^{-5}
Molding Shrinkage	ASTM D955	-	%	0.4 ~ 0.8	0.4 ~ 0.8	0.4 ~ 0.8	0.4 ~ 0.8	0.4 ~ 0.8	0.4 ~ 0.8	0.4 ~ 0.8	0.4 ~ 0.8	0.4 ~ 0.8	0.4 ~ 0.8
HDT	ASTM D648	Unannealed	°F	201	193	201	200	201	201	217	201	201	201
			℃	94	89.5	94	93.5	94	94	103	94	94	94
HDT	ASTM D648	18.6kg Annealed	°F	217	209	217	217	217	217	237	217	217	217
			℃	103	98.5	103	102.5	103	103	114	103	103	103
Mechanical Properties													
Izod Impact Strength	ASTM D256	Notched	J/m	14.7	14.7	14.7	14.7	14.7	14.7	12.8	14.7	14.7	14.7
			KJ/㎡	1.5	1.5	1.5	1.5	1.5	1.5	1.3	1.5	1.5	1.5
			ft.lb/cm	0.28	0.28	0.28	0.28	0.28	0.28	0.24	0.28	0.28	0.28
			kg cm/cm	1.5	1.5	1.5	1.5	1.5	1.5	1.3	1.5	1.5	1.5
Rockwell Hardness	ASTM D785	M Scale	-	99	96	99	98	99	99	101	96	95	98
Tensile Strength	ASTM D638	-	psi	10,938	10,199	10,895	10,938	10,938	11,080	10,824	10,724	10,653	10,795
		-	M Pa	75	70	75	75	75	76	75	74	74	75
		-	kg/cm^2	770	718	767	770	770	780	762	755	750	760
Elongation	ASTM D638	-	%	14	12	14	20	13	16	13	23	13	13
Flexural Strength	ASTM D790	-	psi	19,886	19,460	20,739	20,597	20,170	20,313	20,838	21,307	19,460	20,170
		-	M Pa	137	134	143	142	139	140	144	147	134	139
		-	kg/cm^2	1,400	1,370	1,460	1,450	1,420	1,430	1,467	1,500	1,370	1,420
Flexural Modulus	ASTM D790	-	psi	477,841	519,886	482,955	481,108	482,955	480,114	467,330	468,750	473,011	485,284
		-	M Pa	3,298	3,588	3,333	3,321	3,333	3,314	3,225	3,235	3,265	3,349
		-	kg/cm^2	33,640	36,600	34,000	33,870	34,000	33,800	32,900	33,000	33,300	34,164
Electrical Properties													
Volume Resistance	ASTM D257	-	Ω·cm	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10
Dielectric Strength	ASTM D149	4KV/S	kV/mm	20	20	20	20	20	20	20	20	20	20
Dielectric Constant	ASTM D150	60Hz	-	4	4	4	4	4	4	4	4	4	4
Power Factor	ASTM D150	60Hz	-	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Flame Retardant Properties													
Flame Retardancy	UL 94	-	class (thickness:mm)	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB

REMARKS : The listed values should be used for referential purposed only