

Perspex Acrylic Sheet Datasheet

Properties	Test Method	Units	Perspex GS Cast Sheet	Perspex GS IM Cast Sheet	Perspex XT Sheet	Impact Modified IM50	Impact Modified IM60
Relative Density	ISO 1183	-	1.19	1.18	1.19	1.17	1.16
Rockwell Hardness	ISO 2039-2	M Scale	102	98.5	101	65	45
Ball Indentation	-	-	-	-	-	-	-
Hardness	ISO 2039-1	MPa	-	-	-	-	-
Water Absorption	ISO 62	%	0.2	0.4	0.2	0.3	0.3
Flammability	DIN 4102	-	B2	B2	B2	B2	B2
	UL 94	-	HB	HB	HB	HB	HB
	BS 476, Pt 7	Class	3	3	4	-	-
	NFP 92 - 307	-	M4 without drips	-	M4 without drips	-	-

Mechanical Properties

Properties	Test Method	Units	Perspex GS Cast Sheet	Perspex GS IM Cast Sheet	Perspex XT Sheet	Impact Modified IM50	Impact Modified IM60
Tensile Strength	ISO 527 (a)	MPa	75	62	70	68	50
Elongation at break	ISO 527 (a)	%	4	-	4	18	25
Flexural Strength	ISO 178 (b)	MPa	116	105	107	90	70
Flexural Modules	ISO 178 (b)	MPa	3210	2960	3030	2500	2000
Charpy Impact Strength	ISO 179 (c)	kJ.m^{-2}	12	21.7	10	50	65
	ISO 179 (d)	kJ.m^{-2}	-	1.2	-	5	7
Izod Impact Strength	ISO 180/1A (d)	kJ.m^{-2}	-	-	-	5	7

Thermal Properties

Properties	Test Method	Units	Perspex GS Cast Sheet	Perspex GS IM Cast Sheet	Perspex XT Sheet	Impact Modified IM50	Impact Modified IM60
Vicat Softening Point	ISO 306A	$^{\circ}\text{C}$	>110	>110	>105	>105	>105
Coefficient of Thermal Expansion	ASTM D696	$\times 10^{-5} \cdot \text{K}^{-1}$	7.7	-	7.8	-	-

Optical Properties

Properties	Test Method	Units	Perspex GS Cast Sheet	Perspex GS IM Cast Sheet	Perspex XT Sheet	Impact Modified IM50	Impact Modified IM60
Light Transmission	ASTM D1003	% (e)	>92	>92	>92	90	89
Refractive Light	ISO 489/A	-	1.49	-	1.49	-	-

Electrical Properties

Properties	Test Method	Units	Perspex GS Cast Sheet	Perspex GS IM Cast Sheet	Perspex XT Sheet	Impact Modified IM50	Impact Modified IM60
Surface Resistivity	IEC 93	$\Omega.m^{-2}$	$>10^{14}$	-	$>10^{14}$	-	-
Electrical Strength	IEC 243	$kV.mm^{-1}$	15	-	-	-	-

a= 5 mm/min
 b= 2 mm/min
 c= un-notched
 d = notched
 e = in 3 mm

