

# **Product Overview**

MC<sup>®</sup> Cast Acrylic Sheet is the brand name of the general purpose cell cast acrylic sheet manufactured by PT. Margacipta Wirasentosa. The raw material, methyl methacrylate (MMA) is polymerized into MC<sup>®</sup> cast acrylic sheet. MC<sup>®</sup> cast acrylic sheet is produced in batches between two sheets of superior quality glass. The finished product offers strength and superior top qualities not available in other types acrylic sheet.

Cast Acrylic Sheet		
Dimension	Inch	Mm
	36.2 X 72	920 X 1830
	48 X 72	1220 X 1830
	48 X 96	1220 X 2440
	54.3 X 72	1380 X 1830
	39.4 X 78.8	1000 X 2000
	42.9 X 86.2	1090 x 2190
	50.8 X 98.8	1290 X 2510
	48 x 120	1220 X 3050
	53.2 X 78.8	1350 X 2000
	51 x 100	1300 X 2540
	62 x 98	1580 X 2490
	74 X 98	1880 X 2490
	60 x 120	1525 X 3050
	72x120	1830 X 3050
	80 x 120	2030 X 3050
Thickness	0.06 - 2	1.5 – 50
Finish	Clear, Opal, Transparent (tint), Intransparent	
	(opaque/ matted), Fluorescent (Spotlight), Satin	
Acrylic Rod/ Square		
Length	47.25 - 78.74	1200 - 2000
Thickness	0.2 – 1.5	5 – 38
Acrylic Hinge		
Length	0.79, 1.18, 1.77	20, 30, 45
Acrylic Round Tube Length	78.74	2000
In-Out Diameter		6x8; 8x10; 8x12;
		16x20; 21x25; 26x30;
		31x35; 36x40; 41x45;
		46x50; 56x60
Acrylic U Profile Length	47.25 - 78.74	1200 - 2000
Channel Size	0.08 - 0.2	2, 3, 4, 5
Acrylic Triangle Length	47.25 - 78.74	1200 - 2000
Thickness	0.125 - 0.315	3 - 8



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# **Cast Acrylic Sheet Thickness Tolerance**

Thic	kness	% Tolerance		% Tolerance		
Inch	Mm	standard size	large size	Extra large size		
0.08	2	12%				
0.10	2.5	10%				
0.12	3	10%	14%	17%		
0.16	4	8%	12%	14%		
0.20	5	6%	10%	12%		
0.24	6	6%	10%	12%		
0.31	8	5%	8%	10%		
0.39	10	4%	6%	8%		
0.47	12	4%	6%	8%		
0.59	15	4%	6%	8%		
0.71	18	4%				
0.79	20	4%				
0.98	25	4%				
	above	4%				

Note: Large size = 1300mmX2540mm, 1580mmX2490mm, 1880mmX2490mm 1220mmX3050mm Extra large size = 1525mmX3050mm, 1830mmx3050mm, 2030mmX3050m

*Extra large size = 1525mmX3050mm, 1830mmx3050mm, 2030mmX3050mm Standard size = other sizes* 

# **<u>Cast Acrylic Sheet Chemical Features</u>** (Resistant Properties to Chemical Agents)

Sulfuric Acid 60°C	Stabile to 60%
Hydrochloric Acid 60°C	Stabile to 30%
Nitric Acid 60°C	Stabile to 20%
Caustic Soda 60°C	Stabile to 50%
Aqueous Ammonia 60°C	Stabile to 18%
Acetic Acid 60°C	Dissolve
Ethyl Acetate	Dissolve
Toluene	Dissolve
Ethylene Dichloride	Dissolve
Benzene	Dissolve
Methyl Alcohol	Dissolve
Diemethyl Formamide	Dissolve
Acetone	Dissolve
Aniline	Dissolve



# **Cast Acrylic Sheet Average Physical Properties**

PROPERTIES	UNIT	
Specific Gravity (ASTM D792)		1.19
Hardness		HNC – 96
Water Absorption (ASTM D570)	%	0.35
Tensile Strength: (ASTM D638)		
Tensile strength at yield	Kg/cm <sup>2</sup>	709
Tensile strength of break	Kg/cm <sup>2</sup>	696
Tensile modulus	Kg/cm <sup>2</sup>	29,532
Elongation at break	%	8
Bending Strength: (ASTM D790)		
Flexual Strength	Kg/cm <sup>2</sup>	1.052
Flexual Modulus	Kg/cm <sup>2</sup>	31,264
Impact Strength (ASTM D256)	Kg/cm <sup>2</sup>	1.1
Shear Strength (ASTM D732)	Kg/cm <sup>2</sup>	600 - 650
Transmittancy: (ASTM D1003)		
Full rays	%	93.3
Parallel rays	%	HAZE=
		0.27
Specific Heat	Cal/g/°C	0.35
Heat Distortion Temperature (4.6kg/cm)	°C	100
(ASTM D648)		
Coefficient of Heat Conductivity	Cal/s.cm <sup>2</sup>	4.5 X 10 <sup>-4</sup>
Coefficient of Linear Expansion (ASTM D696)	Cm/cm/°C	6.5 X 10 <sup>-5</sup>
Ultimate Temperature of Continuous Operation	°C	60 - 90
Flammability (ASTM D635)	Mm/ min	33
Surface Resistivity at 28°C	Ohm	> 10 <sup>16</sup>
Volume Resistivity (ASTM D257)	Ohm cm	> 10 <sup>15</sup>
Thermoforming Ranges	°C	140 - 180
Dielectric Strength (ASTM D149)	Kv/Mm	20

#### **Cast Acrylic Sheet Fire Rating**

Cast Acrylic Sheet burn with little smoke generation. Its combustions gases are non toxic and non corrosive. It is classed as:

- Classification E according to Euro Norm (DIN EN SO 11925: 2: 2002-07)
- B2, with no burning droplets, according to DIN 4102
- M4( no droplets) according to NF 92500+
- Class 3 classification according to BS476 part 7
- Category TP (b) according to BS 2782, method 508A for thermoplastics material as defined by Building Regulations
- UL 94HB