

Plexiglas® MC ACRYLIC Product Data

TYPICAL STANDARD PROPERTIES

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL			
Nominal Thickness for data unless otherwise noted		in	0.236"
Specific Gravity	ASTM D-792	--	1.19
Rockwell Hardness	ASTM D-785	M scale	90
Poisson's Ratio	N/A	--	0.35
OPTICAL			
Refractive Index (ND @ 73°F)	ASTM D-542	--	1.49
Luminous Transmittance ¹	ASTM D-1003	%	92.0
Haze I	ASTM D-1003	%	< 2.0
MECHANICAL			
Tensile Strength, maximum	ASTM D-638	psi	10,200
Tensile Strength, yield	ASTM D-638	psi	10,200
Tensile Elongation	ASTM D-638	%	4.5
Tensile Modulus of Elasticity	ASTM D-638	psi	450,000
Flexural Strength, maximum	ASTM D-790	psi	15,000
Flexural Modulus of Elasticity	ASTM D-790	psi	450,000
Notched Izod Impact @ 73°F (23°C)	ASTM D-256	ft-lb / in	0.3
Un-notched Charpy @ 73°F (23°C)	ASTM D-256	ft-lb / 0.5" x 1" section	7.0
THERMAL			
Deflection Temperature under Flexural Load @ 264psi – unannealed ¹	ASTM D-648	°F	200
Coefficient of Thermal Expansion at 60°F	ASTM E-831	in / in / °F x 10 ⁻⁵	3.6
Coefficient of Thermal Conductivity	ASTM C-177	BTU / (hr)(ft ²)(°F/in)	1.3
U-value (summer gain, winter loss)	N/A	BTU / (hr)(ft ²)(°F/in)	0.89, 0.96
Specific Heat Capacity at 77°F	N/A	BTU / (lb °F)	0.35
Maximum Recommended Continuous Service Temperature	N/A	°F	170 – 190
Recommended Thermoforming Temperature	N/A	°F	275 – 350
CRAZE RESISTANCE			
Constant Stress Craze Resistance, IPA ⁵	Modified ARTC Method – Mil P-6997	psi	1,300
Constant Stress Craze Resistance, Aromatic/Alcohol Blend ⁵	Modified ARTC Method – Mil P-6997	psi	1,200
FLAMMABILITY³ & SPECIFICATION COMPLIANCE			
Horizontal Burn Rate ^{1,2}	ASTM D-635	in / min	1.1
Smoke Density	ASTM D-2843	%	1.2
Self Ignition Temperature	ASTM D-1929	°F	860
Surface Burning Characteristics – Flame Spread	CAN/ULC-S102.2-07 File R16788	--	100 (0.125" – 0.250")
Surface Burning Characteristics – Smoke Developed	CAN/ULC-S102.2-07 File R16788	--	> 500 (0.125" – 0.250")
Plastics Component – QMFZ2.E39437 – Flammability Classification	UL 94	--	94HB (≥ 0.060")
Plastics Component – QMFZ2.E39437 – Outdoor Suitability	UL 746C	--	f1 (≥ 0.060" Colorless) f2 (≥ 0.060" ALL)
International Building Code	IBC 2606.4	--	CC2 (0.080" – 0.354")
American National Standard for Safety Glazing	ANSI Z97.1	--	PASS (≥ 0.080")
FMVSS 205 – Federal Motor Vehicle Safety Glazing	ANSI Z26.1	--	AS-5, AS-6, AS-7
Standard Specification for PMMA Acrylic Plastic Sheet	ASTM D-4802	--	Category B-I, Finish I



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Data given are average values and should not be used for specification purposes.
For a complete listing of physical properties, go to www.plexiglas.com
1. This property will change with thickness. The value given is for the thickness indicated in the column heading unless otherwise noted.

2. Tests performed on 0.118" thickness.
3. Flammability tests are small scale tests and may not be indicative of how materials will perform in an actual situation.
4. Conditioned for 24 hours at 122°F
5. The values are after the material has been heated for forming.

For a complete listing of physical properties, go to www.plexiglas.com to download a copy of the Plexiglas® Acrylic Sheet General Information and Physical Properties brochure.