

Plexiglas MC Properties



Typical Properties

Property	Test Method	Units	Values
PHYSICAL			
Nominal thickness		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	ASTM D-1003	%	92
Haze	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"x1" section	7.0
THERMAL			
Deflection temp under flexural load @ 264 psi	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)(°F/in)	1.3
U-value (summer gain, winter loss)	N/A	BTU/(hr)(ft)(°F/in)	0.89,0.96
Specific heat capacity at 77°F	N/A	BTU/(lb°F)	0.35
Max recommended continuous service temp	NA	°F	170-190
Recommended thermoforming temp	N/A	°F	275-350
FLAMMABILITY			
Self ignition temperature	ASTM D-1929	°F	860
Horizontal burn rate	ASTM D-635	In/min	1.1
Smoke density	ASTM D-2843	%	1.2
Surface burn – flame spread	CAN/ULC-S102.2-07File R16788	-	100 (0.125" – 0.250")
Surface burn – smoke developed	CAN/ULC-S102.2-07File R16788	-	> 500 (0.125" – 0.250")
Plastics component QMFZ2.E39437 – Flammability classification	UL 94	-	94 HB (> 0.060")

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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")
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 sheet specification for PMMA acrylic plastic sheet	ASTM D-4802	-	Category B-1, Finish 1

CRAZE RESISTNACE

Constant stress resistance, IPA ⁵	Modified ARTC Method – Mil P-6997	Psi	1,300
Constant stress resistance, Aromatic/alcohol blend ⁵	Modified ARTC Method – Mil P-6997	Psi	1,200

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.