

PLEXIGLAS® Q

Craze-Resistant Acrylic Sheet

PLEXIGLAS® Q acrylic sheet is designed specifically for those applications which require improved craze resistance. Compared to standard PLEXIGLAS® MC acrylic sheet, PLEXIGLAS® Q acrylic sheet provides improved craze resistance even after exposure to harsh solvents, paints, paint thinners, and cleaners.

PLEXIGLAS® Q sheet is made by the same proprietary process as PLEXIGLAS® MC acrylic sheet, which ensures exceptional surface finish, optical quality, and thickness uniformity.

It has excellent clarity and weatherability, as well as desirable thermoforming and machining characteristics.

- Enhanced craze resistance
- Improved chemical resistance
- Can be easily fabricated and thermoformed
- Lightweight - Half the weight of glass
- Weather resistant
- Thickness range from 0.080" - 0.472"



TYPICAL VALUES

	Test Method	Unit	Value
Physical properties			
Nominal thickness for data unless otherwise noted	-	in	0.118"
Specific gravity	ASTM D-792	-	1.19
Rockwell hardness	ASTM D-785	M scale	94
Optical properties			
Refractive index (ND @ 73°F)	ASTM D-542	-	1.49
Luminous transmittance ¹	ASTM D-1003	%	92
Haze ¹	ASTM D-1003	%	< 2.0
Mechanical properties			
Tensile strength, maximum	ASTM D-638	psi	10,900
Tensile strength, yield	ASTM D-638	psi	10,900
Tensile elongation	ASTM D-638	%	6.0
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	0.4
Un-notched charpy @ 73°F (23°C)	ASTM D-256	ft-lb/0.5"x1" section	8.1
Thermal properties			
Deflection Temperature under flexural load @ 264psi - unannealed ^{1,2}	ASTM D-648	°F	202
Coefficient of thermal expansion at 60°F	ASTM E-831	in/in/°F x 10 ⁻⁵	3.5
Coefficient of thermal conductivity	ASTM C-177	BTU/(hr)(ft ²)(°F/in)	1.1
Maximum recommended continuous service temperature	N/A	°F	170 - 190
Recommended thermoforming temperature	N/A	°F	290 - 350
Craze Resistance properties			
Constant stress craze resistance, IPA ⁴	Modified ARTC Method - Mil P-6997	psi	1,950
Constant stress craze resistance, aomatic/alcohol blend ⁴	Modified ARTC Method - Mil P-6997	psi	1,725
Flammability ² & specification compliance properties			
Horizontal burn rate ^{1,2}	ASTM D-635	in/min	0.6
Smoke density ²	ASTM D-2843	%	< 12.0
Self ignition temperature	ASTM D-1929	°F	790
Plastics component - QMFZ2.E39437 - Flammability Classification	UL 94	-	94 HB (≥ 0.060" Colorless)
Plastics component - QMFZ2.E39437 - Outdoor Suitability	UL 746C	-	f1 (≥ 0.060" Colorless)
International building code	IBC 2606.4	-	CC2 (0.118" - 0.220")
International residential code	IRC 308.3	-	CC2 (> 0.125")
American national standard for safety glazing	ANSI Z97.1	-	PASS (≥ 0.080")
Standard specification for PMMA acrylic plastic sheet	ASTM D-4802	-	Category B-1, Finish 1