PLEXIGLAS® BY ARKEMA

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 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 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"**

ALTUGLAS INTERNATIONAL ARKEMA GROUP

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TYPICAL STANDARD PROPERTIES

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL			
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			
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			
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			
Deflection Temperature under Flexural Load @ 264psi – unannealed[1, 2]	ASTM D-648	ºF	202
Coefficient of Thermal Expansion at 60ºF	ASTM E-831	in / in / ºF x 10^{-5}	3.5
Coefficient of Thermal Conductivity	ASTM C-177	BTU / (hr)(ft²)(ºF/in)	1.1
Maximum Recommended Continuous Service Temperature	N/A	ºF	170 – 190
Recommended Thermoforming Temperature	N/A	ºF	290 – 350
CRAZE RESISTANCE			
Constant Stress Craze Resistance, IPA[4]	Modified ARTC Method – Mil P-6997	psi	1,950
Constant Stress Craze Resistance, Aromatic / Alcohol Blend[4]	Modified ARTC Method – Mil P-6997	psi	1,725
FLAMMABILITY[2] & SPECIFICATION COMPLIANCE			
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	ºF	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

Data given are average values and should not be used for specification purposes.

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 0.177" thickness.
3. Flammability tests are small scale tests and may not be indicative of how materials will perform in an actual situation.
4. The values are after the material has been heated for forming.

Plexiglas® acrylic plastic is a combustible thermoplastic. Observe fire precautions appropriate for comparable forms of wood and paper. For building uses, check code approvals. Impact resistance is a factor of thickness. Avoid exposure to heat or aromatic solvents. Clean with soap and water. Avoid abrasives.

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