



# TECHNICAL DATA SHEET

## PLEXIGLAS® G

### Premium Grade Cell-Cast Acrylic for When Quality Matters

PLEXIGLAS® G cell-cast acrylic sheet satisfies the requirements of nearly all high performance applications. The full line of PLEXIGLAS® cast acrylics provide superior long term optical quality, chemical resistance, weatherability, and numerous other benefits that make it the number one choice for acrylic and glass-replacement projects.

This versatile and light-weight material has many residential, commercial, industrial, and professional uses. The full list of possibilities is limited only by the imagination, but typical applications include:

- Aquariums
- Furniture
- Hockey rinks
- Optical lenses
- Pediatric incubators
- Skylights
- Architectural glazing
- Glazing
- Indoor signage
- Outdoor signage
- POP displays



### COLOR OFFERINGS\*

PLEXIGLAS® G acrylic sheet is available in a variety of standard color offerings, premier colors choices, and also offers the ability to create new custom colors or color matches to existing colors, so you're sure to find the color you need.

PLEXIGLAS® G acrylic sheet is available in the standard gloss pattern, as well as in the single sided P-95 and double sided P-95 patters for a softer, frost-like finish.

\* Premier and custom colors are available upon request; minimum order quantity and lead times may vary. Not all thickness/sheet size/color combinations may be in stock. Please contact our customerservice team for more information.

### PRODUCT OFFERINGS\*\*

PLEXIGLAS® G acrylic sheet is available in a variety of sizes and thicknesses, with custom sheet sizes and thicknesses available upon request.

Thickness	Sheet Size
0.118"	48" x 96"
0.177"	60" x 96"
0.236"	72" x 96"
0.354"	49" x 97"
0.472"	61" x 97"
0.625"	73" x 97"
0.708"	50" x 99"
0.944"	62" x 99"
1.25"	74" x 99"
1.50"	51" x 100"
1.75"	63" x 100"
2.00"	75" x 100"

## TYPICAL VALUES

	Test Method	Unit	Value
<b>Physical properties</b>			
Nominal thickness for data unless otherwise noted	-	in	0.236"
Specific gravity	ASTM D-792	-	1.19
Rockwell hardness	ASTM D-785	M scale	100
Water absorption (24 hr immersion @ 73°F) <sup>1</sup>	ASTM D-570	%	0.2
Water absorption (Long term equilibrium - 28 days @ 212°F) <sup>1</sup>	ASTM D-570	%	0.8
Poisson's ratio	N/A	-	0.35
<b>Optical properties</b>			
Refractive index (ND @ 73°F (23°C))	ASTM D-542	-	1.49
Luminous transmittance <sup>1</sup>	ASTM D-1003	%	92.0
Haze <sup>1</sup>	ASTM D-1003	%	< 2.0
<b>Mechanical properties</b>			
Tensile strength, maximum	ASTM D-638	psi	10,500
Tensile strength, yield	ASTM D-638	psi	10,500
Tensile elongation	ASTM D-638	%	4.9
Tensile modulus of elasticity	ASTM D-638	psi	450,000
Flexural strength, maximum	ASTM D-790	psi	16,000
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
<b>Thermal properties</b>			
Deflection temperature under Flexural Load @ 264psi - unannealed <sup>1</sup>	ASTM D-648	°F	205
Coefficient of thermal expansion at 60°F	ASTM E-831	in/in/°F x 10 <sup>-5</sup>	3.9
Coefficient of thermal conductivity	ASTM- C-177	BTU/(hr) (ft <sup>2</sup> ) (°F/in)	1.3
U-Value (summer gain, winter loss)	N/A	BTU/(hr) (ft <sup>2</sup> ) (°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	180 - 200
Recommended thermoforming temperature	N/A	°F	290 - 360
<b>Craze Resistance <sup>5</sup> properties</b>			
Constant stress craze resistance, IPA <sup>5</sup>	Modified ARTC Method Mil P-6997	psi	2,100
Constant stress craze resistance, aromatic/alcohol blend <sup>5</sup>	Modified ARTC Method Mil P-6997	psi	1,700
<b>Flammability <sup>3</sup> &amp; specification compliance properties</b>			
Horizontal burn rate <sup>1,2</sup>	ASTM D-635	in/min	< 1.0
Smoke density	ASTM D-2843	%	1.0
Self ignition temperature	ASTM D-1929	°F	860
Surface burning characteristics - Flame Spread	CAN/ULC-S102.2-07 File R16788	-	135 (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 (0.118" - 0.944")
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
FAA (FAR) section 25.853	Appx F, Part 1, Paragraphs (a)(1)(iv), Procedure (b)(5) 15 second horizontal burn	-	PASS (0.060"-0.472")
Standard specification for PMMA acrylic plastic sheet	ASTM D-4802	-	Category A-1, Finish 1