

The Perfect Material
for a Perfect Tan

UV Retention

Chemical Resistance

Resistance to Yellowing



Plexiglas®
where original ideas take shape

Plexiglas® G-UVT

CELL-CAST ACRYLIC SHEET

Salon owners want tanning beds that remain clean, sturdy, and clear throughout their lifetime, and Plexiglas® G-UVT cell-cast acrylic sheet is specifically designed with this in mind. Using proprietary technology, Plexiglas® G-UVT acrylic sheet has passed more than 10,000 hours of severe UVA and UVB weathering tests without significant change in UV transmission and clarity.

Plexiglas® G-UVT acrylic sheet is available in a patterned finish that hides light sources without sacrificing clarity. This Plexiglas® G-UVT P-95 acrylic sheet pattern creates a sleek, modern look while hiding fingerprints or smudges.

Typical applications include tanning beds, zoo exhibits, greenhouses, UV transmissive skylights, and HID (High Intensity Discharge) lamp covers.

- UV transmission starts just above 250 nm
- Excellent UV retention properties
- Resistant to yellowing over time
- Excellent craze and chemical resistance
- High thermal stability and mechanical properties
- Can be easily thermoformed

THICKNESS

0.118"
0.125"
0.150"
0.157"
0.170"
0.177"
0.187"
0.312"
0.354"
0.375"
0.472"
0.500"

SHEET SIZE*

48" X 96"
50" X 99"
60" X 96"
62" X 99"
72" X 96"
74" X 99"

*Custom lengths are available with minimum requirements.

Plexiglas® G-UVT

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TYPICAL SYANDARD PROPERTIES

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL			
Nominal Thickness for data unless otherwise noted		in	0.177"
Specific Gravity	ASTM D-792	---	1.19
Rockwell Hardness	ASTM D-785	M scale	101
OPTICAL			
Refractive Index (ND @ 73°F)	ASTM D-542	---	1.49
Luminous Transmittance ¹	ASTM D-1003	%	92.0
Ultraviolet Transmittance ² at 300 nm	ASTM D-1003	%	> 80.0
Haze ¹	ASTM D-1003	%	< 1.0
Yellowness Index ¹	ASTM E-313	---	< 1.0
Weathering performance after 3000 hours UVB-313EL exposure	ASTM G-154	---	---
Yellowness Index change	ASTM E-313	---	0.2
Haze change	ASTM D-1003	%	1.6
Mechanical			
Tensile Strength, maximum	ASTM D-638	psi	11,200
Tensile Strength, yield	ASTM D-638	psi	11,200
Tensile Elongation	ASTM D-638	%	4.6
Tensile Modulus of Elasticity	ASTM D-638	psi	450,000
Flexural Strength, maximum	ASTM D-790	psi	19,800
Flexural Modulus of Elasticity	ASTM D-790	psi	450,000
Notched Izod impact @ 73°F (23°C)	ASTM D-256	ft-lb / in	0.46
THERMAL			
Deflection Temperature under Flexural Load @ 66psi – unannealed ¹	ASTM D-648	°F	225
Deflection Temperature under Flexural Load @ 264psi – unannealed ¹	ASTM D-648	°F	214
Vicat Softening Temperature – 1kg load	ASTM D-1525	°F	237
Vicat Softening Temperature – 5kg load	ASTM D-1525	°F	226
Coefficient of Thermal Expansion at 60°F	ASTM E-831	in / in / °F x 10 ⁻⁵	3.9
Maximum Recommended Continuous Service Temperature	N/A	°F	180 – 200
Recommended Thermoforming Temperature	N/A	°F	290 – 360

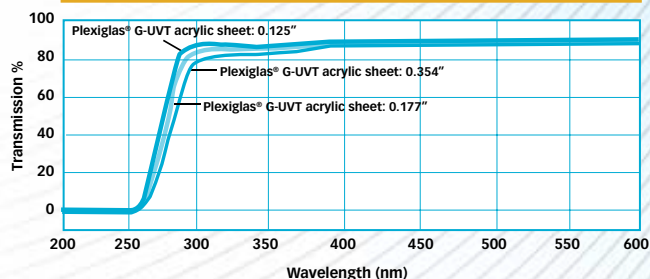
CRAZE RESISTANCE			
Constant Stress Craze Resistance, IPA ⁴	Modified ARTC Method – Mil P-6997	psi	2,100
Constant Stress Craze Resistance, Aromatic / Alcohol Blend ⁴	Modified ARTC Method – Mil P-6997	psi	1,700

FLAMMABILITY³ & SPECIFICATION COMPLIANCE			
Plastics Component – QMF22.E39437 - Flammability Classification	UL 94	---	94HB (≥ 0.118")
Standard Specification for PMMA Acrylic Plastic Sheet	ASTM D-4802	---	Category A-1, Finish 1 or 2, Type UVT

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

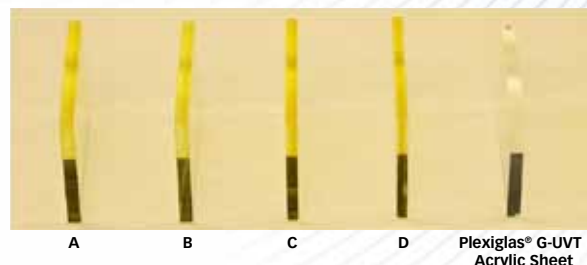
- This property will change with thickness. The value given is for the thickness indicated in the column heading unless otherwise noted.
- Tests performed on 0.125" thickness.
- Flammability tests are small scale tests and may not be indicative of how materials will perform in an actual situation.
- The values are after the material has been heated for forming.

Plexiglas® G-UVT Acrylic Sheet UV Transmission Curves



Plexiglas® G-UVT acrylic sheet transmissions measured by a Perkin Elmer® Lambda 850 UV/Vis spectrometer.

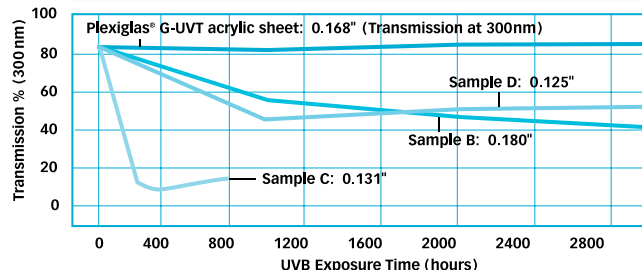
Edge Color Comparisons After UVB Exposure



Edge color comparisons after UVB exposure (1200 hours). Plexiglas® G-UVT acrylic sheet showed no color change, and the competitive UVT sheets showed severe yellowness after UVB lamp exposure. Samples A, B, C, and D are various commercial UVT type samples. Reference test method: ASTM G-154

Conditions: Q-Panel Accelerated Weathering Tester, model QUV/SE, with UVB 313EL lamps. The set point for the tester is 0.67w/m² at the calibration wavelength λ=313nm. Set temperature: 45°C.

Comparison of Plexiglas® G-UVT Acrylic Sheet vs. Commercial UVT Samples



UV transmission at 300nm for Plexiglas® G-UVT acrylic sheet and various commercial UVT type samples as a function of UVB exposure time.

Reference test method: ASTM G-154

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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