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 Intesity 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.

ALTUGLAS INTERNATIONAL
ARKEMA GROUP

Plexiglas® G-UVT

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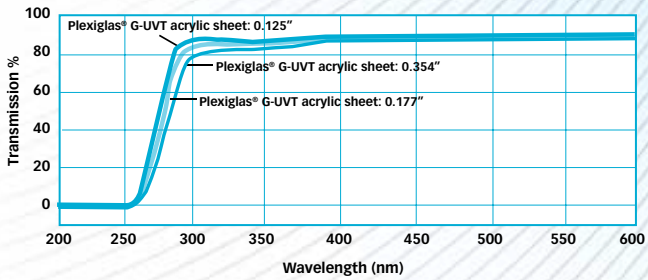
TYPICAL SYANDARD PROPERTIES

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
FLAMMABILITY[3] & SPECIFICATION COMPLIANCE			
Plastics Component – QMFZ2.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.

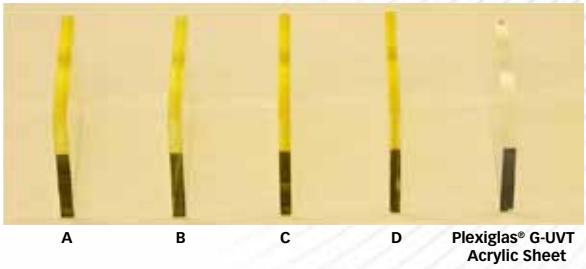
1. This property will change with thickness. The value given is for the thickness indicated in the column heading unless otherwise noted.
2. Tests performed on 0.125" thickness.
3. Flammability tests are small scale tests and may not be indicative of how materials will perform in an actual situation.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

Plexiglas® 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

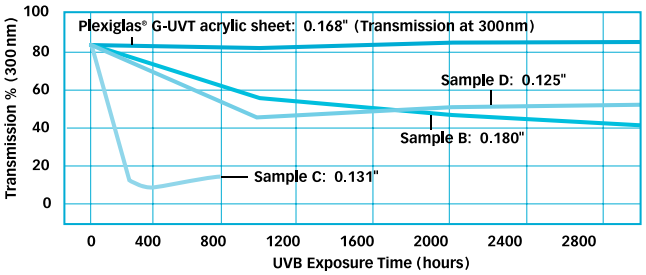


Edge color comparisons after UVB exposure (1200 hours). Plexiglas® G-UVT acrylic sheet showed no color change, and the competitive UVT sheets showed severe yellowness after UVB lamp exposure. Samples A, B, C, and D are various commercial UVT type samples.

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/m^2 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

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