

SUVT ACRYLIC SHEET



SUVT Acrylic Sheet

SUVT is a continuous cast acrylic sheet that transmits UV light down to 280nm and can be formed into shapes. The high gloss surface is easy to clean and keep sterile. SUVT is half the weight of, and more impact resistant than glass.

Applications

Indoor tanning beds, animal habitats, greenhouses

Warning for use: SUVT Acrylic is used in such applications as sun tanning beds and allows transmission of harmful UV light. Exposure to UV light may cause; cancer, cataracts, possible immune suppression, violent outbreaks of skin-related conditions such as herpes lesions, and premature aging of the skin.

Typical Properties*

Property	Test Method	Units	Values
PHYSICAL			
Specific gravity/relative density	ASTM D 792	-	1.19
Water absorption	ADTM D 570		0.4
24 hrs @ °C		%	0.2
2 hrs boiling water immersion		%	0.6
MECHANICAL			
Tensile strength	ASTM D 638	psi	11,000
% Elongation @ break		%	7.6
Modulus of elasticity		psi	465,000
% Elongation @ yield		%	6.0
Flexural strength	ASTM D 790	psi	14,700
Flexural modulus		psi	461,000
Impact strength	ASTM D 695	psi	
Compressive strength (x-y plane)		psi	83,300
Compressive stress @ yield		psi	18,000
Compressive modulus		psi	279,000
Charpy (un-notched)	ASTM D 256	ft-lb/in/in	5.0
Charpy (notched)	ASTM D 6110	J/m	20.8
Shear strength (punch tool)	ASTM D 732	psi	11,200
Izod (procedure A)	ASTM D 256	ft-lb/in	0.32
Rockwell hardness	ASTM D 785		M-100
Residual shrinkage (b) (internal strength)	ASTM D 702	%	2.5 maximum
OPTICAL			
Refractive index	ASTM D 542	-	1.49
Haze	ASTM D 1003	%	< 1
Light transmission	ASTM D 1003	%	92
Yellowness index		-	< 0.3
MECHANICAL			
Maximum continuous service temperature	-	°F	175
Coefficient of thermal conductivity	-	Btu-in/ft ² /hr/F°	1.45
Deflection temp under load, 264 psi	ASTM D 648	°F	200
Coefficient of linear thermal expansion	ASTM D 696	In/in/°F	3.5 E ⁻⁰⁵
Specific heat	-	Btu/lb/°F	0.35
Smoke density rating	ASTM D 2843	%	13.5
Smoke developed index	ASTM E 83	-	750

SUVT ACRYLIC SHEET



Flame spread index	ASTM E 84	-	95
Specific energy	-	Btu/lb	11,300
Self ignition temperature	ASTM D 1929	°F	750
Radiant panel, flame spread index	ASTM E 162	-	155
Horizontal burn	ASTM D 635	In./min.	0.71
UL Horizontal burn rating	UL 94	-	HB

ELECTRICAL

Volume resistivity	ASTM D 257	Ohm/cm	> 3.912E ¹⁵
Surface resistivity	ASTM D 257	Ohm/sq	> 5.237 E ¹⁵
Dielectric strength (2000v/sec)	ASTM D 149	V/mil	354
Dielectric constant, k'	ASTM D 150		
60 Hz		Hz	3.3
1 KHz		Hz	3.0
1 MHz		Hz	2.7
Dissipation factor, D	ASTM D 150		
60 Hz		Hz	0.06
1 KHz		Hz	0.04
1 MHz		Hz	0.02
Arc resistance	ASTM D 495	-	No tracking

*Typical properties are not intended for specification purposes.

Wavelength (nm)	UVT range
@ 280	25.6 – 30.2
@ 290	56.1 – 66.0
@ 300	70.9 – 83.4
@ 320	75.3 – 88.6
@ 340	76.0 – 89.4
@ 380	78.5 – 92.3

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.