

Product Data - SUVT Acrylic



UV-A AND UV-B ULTRAVIOLET LIGHT

SUVT Acrylic 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 Acrylic also is half the weight of, and more impact resistant than glass.

APPLICATIONS

Indoor tanning beds, animal habitats, greenhouses

TYPICAL PROPERTIES*

Property	Test Method	Units	Values (a)
PHYSICAL			
Specific Gravity	ASTM D792	–	1.19
Water Absorption	ASTM D570		
24 hrs @ 23°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 D790	psi	14,700
Flexural Modulus		psi	461,000
Impact Strength			
Compressive Strength (x-y plane)	ASTM D695	psi	83,300
Compressive Stress @ Yield		psi	18,000
Compressive Modulus		psi	279,000
Charpy (un-notched)	ASTM D256	ft-lb/in/in	5.0
Charpy (notched)	ASTM D6110	J/m	20.8
Shear Strength (punch tool)	ASTM D732	psi	11,200
Izod (procedure A)	ASTM D256	ft-lb/in	0.32
Rockwell Hardness	ASTM D785		M-100
Residual Shrinkage (b) (Internal Strength)	ASTM D702	%	2.5 maximum
OPTICAL			
Refractive Index	ASTM D542	–	1.49
Haze	ASTM D1003	%	< 1
Light Transmission	ASTM D1003	%	92
Yellowness Index (YI)		–	< 0.3
THERMAL			
Maximum Continuous Service Temperature	–	°F	175 (d)
Coefficient of Thermal Conductivity	–	Btu-in/ft ² / hr/°F	1.45
Deflection Temperature Under Load, 264 psi	ASTM D648	°F	200
Coefficient of Linear Thermal Expansion	ASTM D696	in/in/°F	3.5 E-05
Specific Heat	–	Btu/lb/°F	0.35
Smoke Density Rating	ASTM D2843	%	13.5
Smoke Developed Index	ASTM E84	–	750
Flame Spread Index	ASTM E84	–	95
Specific Energy	–	Btu/lb	11,300
Self Ignition Temperature	ASTM D1929	°F	750
Radiant Panel, Flame Spread index	ASTM E162	–	155
Horizontal Burn	ASTM D635	in./min.	0.71
UL Horizontal Burn Rating	UL94	–	HB
ELECTRICAL			
Volume Resistivity	ASTM D257	Ohm/cm	>3.912E+15
Surface Resistivity	ASTM D257	Ohm/sq	> 5.237E+15
Dielectric Strength (2000v/sec)	ASTM D149	V/mil	354
Dielectric Constant, k'			
60 Hz		Hz	3.3
1 KHz	ASTM D150	Hz	3.0
1 MHz		Hz	2.7
Dissipation Factor, D			
60 Hz		Hz	0.06
1 KHz		Hz	0.04
1 MHz		Hz	0.02
Arc Resistance	ASTM D495	–	No tracking

*All listed test values are on 0.236" thickness

Notes:

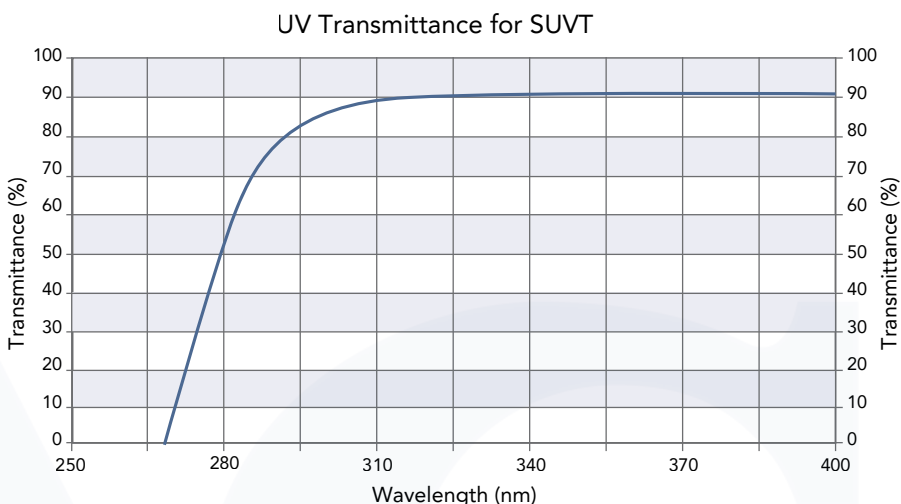
- Values provided should not be used for specification purposes. Some values may vary with sheet thickness.
- Measured at room temperature before and after heating above 300° F.
- Numerical values indicate % light transmission loss after indicated cycles.
- It is recommended that temperatures not exceed 180°F for continuous service

These data are presented only as typical properties of the base resins which, to our best knowledge, are true and accurate. However, since conditions of use are beyond our control, all recommendations or suggestions are presented without guaranty or responsibility on our part. We disclaim all liability in connection with the use of information contained herein or otherwise. All risks of such use are assumed by the user. Furthermore, nothing contained herein shall be construed as an inducement or recommendation to use any process or to manufacture or use any product in conflict with existing or future patents.

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Warning for use: SUVT is an acrylic sheet 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.



****Graph depicts % UVT on 0.100" thick SUVT acrylic sheet**

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

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