ACRYSAN™

Physical Properties – AcrySan™

Aristech Acrylics AcrySan™ is a partially "cross-linked" commercial continuous cast acrylic sheet with unparalleled thermoforming properties. AcrySan™ was developed for plumbingware, spa, automotive and other applications.

PROPERTY	TYPICAL VALUES	UNITS	TEST METHOD
General			
Thickness	0.125 (3.17)	Inch (mm)	—
Specific Gravity	1.19	—	ASTM D-792
Optical Unaged			
Refractive Index	1.49	—	ASTM D-542
Light Transmission	93.0	%	ASTM D-1003
Haze	0.8	%	ASTM D-1003
Ultraviolet Light Transmission (250-370 nanometers)	<1.0	%	UV Spectrophotometer
Optical aged			
Light Transmission	93.0	%	ASTM D-1003
Haze	1.0	%	ASTM D-1003
Yellowness Index	+ 0.45	YI	ASTM D-1925
Mechanical			
Tensile Strength	10,000 (68.9)	psi (MPa)	ASTM D-638
Tensile Modulus	460,000 (3,171)	psi (MPa)	ASTM D-638
Tensile Elongation	5.5	%	ASTM D-638
Flexural Strength	15,500 (106)	psi (MPa)	ASTM D-790
Flexural Modulus	450,000 (3,102)	psi (MPa)	ASTM D-790
Notched Izod Impact	0.4 (2.1)	ft-lb/in.of notch (kJ/m^2)	ASTM D-256 (Method A)
Charpy Impact (Un-notched)	4.6 (24.2)	ft.-lb./in. (kJ/m^2)	ASTM D-6110
Falling Dart Impact	3.0 (4.1)	ft.-lbs. (J)	FTMS 406-M-1074
Rockwell Hardness (M)	90 - 100	—	ASTM D-785
Barcol Hardness	48 - 52	—	ASTM D-2583

ACRYSAN™

PROPERTY	TYPICAL VALUES	UNITS	TEST METHOD
Thermal			
DTUL @ 264 psi (1.82 MPa)	190 (88)	°F (°C)	ASTM D-648
Thermal Conductivity	1.4 (20.2)	Btu/(h·ft²·°F/in) (W/(m²·K/cm))	Cinco-Fitch
Specific Heat	0.35 (1465)	Btu/(lb·°F) (J/(kg·K))	ASTM C-351
Coefficient of Linear Thermal Expansion	4.1×10^{-5} (7.4×10^{-5})	in./in./°F (cm/cm/°C)	ASTM D-696
Thermal Stability 30 min.@ 356°F(180°C)	No degradation	—	ASTM D-4802
Flammability	94 HB	—	UL Test # 94
Miscellaneous			
Water Absorption	0.33	%	ASTM D-570