

Physical Properties - Acrysteel® IGP

Aristech Acrylics Acrysteel® IGP is a continuous cast impact acrylic sheet with solvent cementability. The following physical properties were determined using 0.177" (4.5 mm) thickness clear Aristech Acrylics Acrysteel® IGP acrylic sheet. Properties may vary somewhat on other thicknesses and/or colors (translucent or opaque).

PROPERTY	TYPICAL VALUES	UNITS	TEST METHOD
General:			
Thickness	0.177 (4.5)	Inch (mm)	—
Specific Gravity	1.17	—	ASTMD-792
Water Absorption	0.30	%	ASTMD-570
Optical:			
Refractive Index	1.49	—	ASTMD-542
Light Transmission	93.0	%	ASTMD-1003
Haze®75°F (23.9°C)	2.5	%	ASTMD-1003
Yellowness Index	<0.5	YI	ASTME-313
Mechanical:			
Tensile Strength	8,700 (60)	psi (MPa)	ASTMD-638
Tensile Modulus	370,000 (2,551)	psi (MPa)	ASTMD-638
Tensile Elongation at Break	20	%	ASTMD-638
Flexural Strength	13,200 (91)	psi (MPa)	ASTMD-790
Flexural Modulus	325,000 (2,240)	psi (MPa)	ASTMD-790
Notched Izod Impact	0.5 (2.7)	ft-lb/in.of notch (kJ/m ²)	ASTM D-256 (Method A)
Charpy Impact (Un-notched)	9.0 (48)	ft.-lb./in. (kJ/m ²)	ASTMD-6110
Gardner Impact	30.8 (3.48)	in.-lbs. (J)	ASTMD-5420
Rockwell Hardness (M)	88	—	ASTMD-785
Barcol Hardness	42	—	ASTMD-2583
Thermal:			
Hot Forming Temperature	340-380 (171-193)	°F (°C)	Aristech Method
DTUL @ 264 psi (1.82 MPa)	180 (82.2)	°F (°C)	ASTMD-648
Thermal Conductivity	1.4 (20.2)	Btu/(h·ft ² ·°F/in) (W/(m ² ·K/cm))	Cinco-Fitch
Coefficient of Linear Thermal Expansion	4.2 x 10 ⁻⁵ (7.6 x 10 ⁻⁵)	in./in./°F (cm/cm/°C)	ASTMD-696
Thermal Stability	No Effect	—	ASTMD-4802
30 min.@356°F (180°C)			
Flammability	94 HB	—	UL Test # 94

For cautions and other information relating to handling of an exposure to this product, please see the applicable material safety data sheet published by Aristech Surfaces.

These instructions are based upon experience with Aristech Surfaces products only. Experience with products of other manufacturers is specifically disclaimed. For most uses, check for local code approval and test for application suitability. These procedures, techniques and suggested materials should only be used by personnel who are properly trained in the safe handling of the chemicals and the equipment with which they are working. Avoid aromatic solvents, clean with mild soap and water, avoid abrasives. These suggestions are based on information believed to be reliable, however, Aristech Surfaces makes no warranty, guarantee, or representation and assumes no obligations or liability as to the absolute correctness or sufficiency of any of the foregoing, or that additional or other measures may not be required under particular conditions or circumstances.



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Page 2