

Physical Properties - Avonite® Acrylic Solid Surfacing Sheets 12mm

Aristech Surfaces' Avonite Acrylic Solid Surface "Specialty Blend Solid Surface" sheet products in a variety of attractive colors provide exceptionally weatherable, strong, non-porous, scratch and stain resistant material for architectural designs and utilitarian surfaces.

PROPERTY	UNITS	SOLIDS	SMALL PARTICULATE	MEDIUM PARTICULATE	LARGE PARTICULATE	TEST METHOD
General						
Nominal Thickness*	mm	12mm	12mm	12mm	12mm	-
Density	g/cm ³	1.73	1.60	1.62	1.63	ASTM D 792
Water Absorption	%	0.04	0.05	0.05	0.05	ASTM D 570
Mechanical						
Tensile Strength	MPa	31.1	31.1	28.3	25.2	ASTM D 638
Tensile Modulus	MPa	10,514	7,142	8,411	8,204	ASTM D 638
Tensile Elongation	%	0.40	1.00	0.55	0.45	ASTM D 638
Flexural Strength	MPa	64.1	55.2	49.3	47.2	ASTM D 790
Flexural Modulus	MPa	8,687	7,329	7,240	8,067	ASTM D 790
Barcol Hardness	-	63	58	59	60	ASTM D 2583
Rockwell Hardness (M Scale)	-	94	94	93	93	ASTM D 785
Charpy Impact	J/m	58.7	58.7	45.3	42.7	ASTM D 6110
Ball Impact (227g ball, no failure)	cm	>380	305	290	215	NEMA LD3-3.8
Thermal						
DTUL @ 1.82 Mpa	°C	102	93	93	92	ASTM D 648
Coefficient of Thermal Expansion	cm/cm/°C	3.76x10 ⁻⁵	4.43x10 ⁻⁵	4.43x10 ⁻⁵	4.43x10 ⁻⁵	ASTM D 696
Boiling Water Resistance	-	No Effect	No Effect	No Effect	No Effect	ISFA 2-01
High Temperature Resistance	-	No Effect	No Effect	No Effect	No Effect	ISFA 2-01
Reaction to Fire	-	Class A	Class A	Class A	Class A	ASTM E 84
Combustion Toxicity	-	98	67	67	67	Pittsburgh Protocol
Total volatile Organic Compounds	µg/m ² /hr	69.1	69.1	69.1	69.1	ASTM D 5116

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Surface						
Consistency Of Color (Same Sheet)	-	Passes	Passes	Passes	Passes	ISFA 2-01
Light Resistance	-	No Effect	No Effect	No Effect	No Effect	ISFA 2-01
Cleanability/Stain Resistance	-	Passes	Passes	Passes	Passes	NEMA LD3-3.4
Stain Resistance	-	Passes	Passes	Passes	Passes	ANZI/ICPA SS-1
Bacterial Resistance	-	No growth	No growth	No growth	No growth	ASTM G 22
Fungi Resistance	-	No growth	No growth	No growth	No growth	ASTM G 21
Food Zone Use	-	Approved	Approved	Approved	Approved	NSF 51

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

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