



TECHNICAL BULLETIN #205

Physical Properties - Avonite® Acrylic Solid Surfacing Sheets 3mm

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	PARTICULATES	TEST METHOD
General				
Nominal Thickness	mm	3mm	3mm	-
Density	g/cm ³	1.60	1.60	ASTM D 792
Water Absorption	%	0.13	0.08	ASTM D 570
Mechanical				
Tensile Strength	psi	4,850	4,000	ASTM D 638
Tensile Modulus	psi	1,017,000	1,110,000	ASTM D 638
Tensile Elongation	%	2.40	1.10	ASTM D 638
Flexural Strength	psi	10,300	8,000	ASTM D 790
Flexural Modulus	psi	880,000	975,000	ASTM D 790
Barcol Hardness	-	50	57	ASTM D 2583
Rockwell Hardness (M Scale)	-	88	94	ASTM D 785
Charpy Impact	ft-lbs/inch	1.95	0.90	ASTM D 6110
Ball Impact (½ lb. ball, no failure) Supported	Inches	>150	>150	NEMA LD3-3.8
Ball Impact (½ lb. ball, no failure) Unsupported	Inches	36	30	NEMA LD3-3.8
Thermal				
DTUL @ 264 psi	°F	190	200	ASTM D 648
Coefficient of Thermal Expansion	in/in/°F		2.46x10 ⁻⁵	ASTM D 696
Boiling Water Resistance	-	No Effect	No Effect	ISFA 2-01
High Temperature Resistance	-	No Effect	No Effect	ISFA 2-01
Reaction To Fire	-	Class B	Class B	ASTM E 84
Combustion Toxicity	-	98	67	Pittsburgh Protocol
Total volatile Organic Compounds	µg/m ² /hr	69.1	69.1	ASTM D 5116

PROPERTY	UNITS	SOLIDS	SMALL PARTICULATE	TEST METHOD
Surface				
Consistency Of Color (Same Sheet)	-	Passes	Passes	ISFA 2-01
Light Resistance	-	No Effect	No Effect	ISFA 2-01
Cleanability/Stain Resistance	-	Passes	Passes	NEMA LD3-3.4
Stain Resistance	-	Passes	Passes	ANZI/ICPA SS-1
Bacterial Resistance	-	No growth	No growth	ASTM G 22
Fungi Resistance	-	No growth	No growth	ASTM G 21
Food Zone Use	-	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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