



TECHNICAL BULLETIN #202

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	psi	4,500	4,500	4,100	3,650	ASTM D 638
Tensile Modulus	psi	1,525,000	1,036,000	1,220,000	1,190,000	ASTM D 638
Tensile Elongation	%	0.40	1.00	0.55	0.45	ASTM D 638
Flexural Strength	psi	9,300	8,000	7,150	6,850	ASTM D 790
Flexural Modulus	psi	1,260,000	1,063,000	1,050,000	1,170,000	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	ft-lbs/inch	1.10	1.10	0.85	0.80	ASTM D 6110
Ball Impact (½ lb. ball, no failure)	Inches	>150	120	114	84	NEMA LD3-3.8
Thermal						
DTUL @ 264 psi	°F	215	200	200	198	ASTM D 648
Coefficient of Thermal Expansion	in/in/°F	2.09x10 ⁻⁵	2.46x10 ⁻⁵	2.46x10 ⁻⁵	2.46x10 ⁻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

PROPERTY	UNITS	SOLIDS	SMALL PARTICULATE	MEDIUM PARTICULATE	LARGE PARTICULATE	TEST METHOD
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

This information is based upon technical data and experience with Aristech Surfaces products, and is intended for use by persons having technical skill and at their own discretion and risk. Before using an Aristech Surfaces product, customers and other users should make their own independent determination that the product is suitable for the intended use. For most uses, check your local code for approval and test for application suitability. Aristech Surfaces does not warrant that this information is absolutely current or accurate. Aristech Surfaces makes no representations or warranties, express or implied, with respect to this information, including any warranties of title, non-infringement of copyright or patent rights of others, merchantability, or fitness or suitability for any purpose. Aristech Surfaces assumes no liability or responsibility for the accuracy, completeness, or usefulness of any information. This information should not be relied upon to create specifications, designs, or installation guidelines. The persons responsible for the use and handling of the product are responsible for ensuring the design, fabrication, or installation methods and process present no health or safety hazards. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents. Aristech Surfaces does not have and assumes no liability for the use of or results obtained from such information, whether or not based on Aristech's negligence. Aristech shall not be liable for (i) any damages, including claims relating to the specification, design, fabrication, installation, or combination of this product with any other product(s), and (ii) special, direct, indirect or consequential damages



www.aristechsurfaces.com

GLOBAL HEADQUARTERS
7350 Empire Drive, Florence, KY 41042, USA
+1.800.354.9858

BELEN OFFICES
1945 Hwy 304, Belen NM 87002, USA

INTERNATIONAL OFFICES
Suite LG2, 344-354 Grays Inn Road, London, WC1X 8BP, UK
+44.(0).207.554.0744