TECHNICAL DATA & PERFORMANCE PROPERTIES

AVONITE®
Acrylic Solid Surface

Standard Sheet Thickness:	1/2" (12mm), 1/4" (6mm)	
Standard Sheet Dimensions:	1/2" (12mm)	30" x 144" (762mm x 3,658mm)
Standard Wall Panel Dimensions:	1/4" (6mm) Thickness	36" x 96" (914mm x 2,438mm) 48" x 96" (1214mm x 2,438mm) 60" x 96" (1,518mm x 2,438mm)

STUDIOCOLLECTION®
Specialty Blend Solid Surface

Standard Sheet Thickness:	1/2" (12mm)	
Standard Sheet Dimensions:	1/2" (12mm)	36" x 120" (914mm x 3,048mm)

	Acrylic Solid Surface Class I		Studio Class I		Studio Class III	
NEMA LD 3 2000 Staining Reagent	Cleanability Rating	Stain Rating	Cleanability Rating	Stain Rating	Cleanability Rating	Stain Rating
Distilled Water	0	■	0	■	0	■
Tap Water	0	■	0	■	0	■
Ethyl Alcohol, 50% Solution	0	■	0	■	0	■
Isopropyl Alcohol, 70% Solution	0	■	0	■	0	■
VM&P Naphtha/Ethyl Alcohol, 50/50 Solution	0	■	0	■	0	■
Nail Polish Remover	0	■	0	■	0	■
Acetone	0	■	0	■	0	■
Bar Soap Solution, 5% In Water	0	■	0	■	0	■
Household Detergent, 5% In Water	0	■	0	■	0	■
Household Ammonia	0	■	0	■	0	■
Tomato Catsup	0	■	0	■	0	■
Vegetable Oil	0	■	0	■	0	■
Trisodium Phosphate, 1% Solution	0	■	0	■	0	■
Coffee	0	■	0	■	0	■
Tea	0	■	0	■	0	■
Whole Milk	0	■	0	■	0	■
Citric Acid, 10% Solution	0	■	0	■	0	■
Yellow Mustard	0	■	0	■	0	■
10% Povidone Iodine	3	■	1	■	0	■
Distilled Vinegar	0	■	0	■	0	■
Lipstick (Red)	1	■	1	■	2	■
Washable Ink (blue)	1	■	1	■	2	■
Grape Juice	0	■	0	■	0	■
Red Food Dye	1	■	1	■	2	■
Beet Juice	0	■	0	■	0	■
Merthiolate	1	■	1	■	2	■
Wax Crayon	1	■	1	■	2	■
Shoe Polish (Black Paste)	3	■	1	■	2	■
Ball Pen Ink	3	■	1	■	3	■
Felt Pen Ink	3	■	1	■	2	■
Black Permanent Marker	3	■	1	■	3	■
#2 Pencil	3	■	1	■	2	■
Supermarket Stamp Ink (Purple)	1	■	1	■	2	■

0 Rating – Staining reagent removed with a cellulose sponge moistened with water.
1 Rating – Staining reagent removed with a cellulose sponge moistened with water and commercial cleanser.
2 Rating – Staining reagent removed with a stiff nylon bristle brush with a commercial cleanser and baking soda.
3 Rating – Staining reagent removed with a cotton ball saturated with acetone.
4 Rating – Staining reagent removed with a cotton ball saturated with hypochlorite bleach.
5 Rating – Stains remaining after the previous cleaning steps are rated 5.

■ *= No Effect*

Property	Typical Results Acrylic Solid Surface	Typical Results Studio Collection Class I	Typical Results Studio Collection Class III	Test Method
General				
Thickness Tested	0.500"	0.500"	0.500"	–
Specific Gravity	1.6	1.6	1.3	ASTM D-792
Water Absorption (24hrs.)	0.04%	0.03%	0.04%	ASTM D-570
Mechanical				
Tensile Strength	4,000 psi	3,700 psi	2,300 psi	ASTM D-638
Tensile Modulus	1,100,000 psi	1,200,000 psi	730,000 psi	ASTM D-638
Tensile Elongation	2.1%	0.38%	0.34%	ASTM D-638
Flexural Strength	8000 psi	6500 psi	4100 psi	ASTM D-790
Flexural Modulus	1,100,000 psi	1,200,000 psi	720,000 psi	ASTM D-790
Barcol Hardness	60	60	45	ASTM D-2583
Rockwell Hardness	86	99	105	ASTM D-785
Un-notched Izod Impact	1.40 ft.lbs./inch	0.67 ft.lbs./inch	0.42 ft.lbs./inch	ASTM D-4812
Notched Izod Impact	0.14 ft.lbs./inch	0.15 ft.lbs./inch	0.15 ft.lbs./inch	ASTM D-256
Ball Impact (1/2 lb. ball)	>150 Inches	>150 Inches	>150 Inches	NEMA LD3-3.8
Total Volatile Organic Compound	6.91 µg/m²/hr	3.9 µg/m²/hr	13.9 µg/m²/hr	ASTM-D5116
Thermal				
DTUL @ 264 psi	200 °F	180 °F	175 °F	ASTM D-648
Coefficient of Thermal Expansion	2.3 X 10^{-5} in./in.°F	2.1 X 10^{-5} in./in.°F	2.9 X 10^{-5} in./in.°F	ASTM D-696
Boiling Water Resistance	No Effect	No Effect	No Effect	ISSFA SST 8.1-00
High Temperature Resistance	No Effect	No Effect	No Effect	ISSFA SST 9.1-00
Flame Spread	<25	<25	>75	ASTM E 84
Smoke Generation	<25	<25	>450	ASTM E 84
Combustion Toxicity	96 (solid colors) 67 (patterns)	62.25	19.33	Pittsburgh Protocol (LC_{50} Test)
New York City Adm. Code 27-131*				
Flame Spread	20	20	180	MEA 64-96-M
Smoke Density	155	155	>450	MEA-142-96-M
Surface				
Cleanability / Stain Resistance	Pass	Pass	Pass	NEMA LD3-3.4
Stain Resistance	Pass	Pass	Pass	ANSI Z 124.3
Consistency of Color (same sheet)	Pass	Pass	Pass	ISSFA SST 2.1-00
Light Resistance	No Effect	No Effect	No Effect	ISSFA SST 7.1-00
Food Zone Use	NSF 51 Approved	NSF 51 Approved	NSF 51 Approved	NSF
Fungal/Bacterial Resistance	Does not support microbial growth	Does not support microbial growth	Does not support microbial growth	ASTM G-21
HIV-Resistance	Disinfected surface does not support HIV	Disinfected surface does not support HIV	Disinfected surface does not support HIV	Protocol 61-074-1
Aircraft: FAA Part 23 or 25	Acceptable	Acceptable	Acceptable	FAR 25.853
Federal Motor Vehicle Safety Stnd.	Pass	Pass	Pass	
Canadian Motor Vehicle Safety Stnd.	Pass	Pass	Pass	

* For specific part numbers, go to www.avonitesurfaces.com