

PRODUCT IDENTIFICATION

Avonite Surfaces™ solid surfacing and shaped products.

MANUFACTURER

Aristech Acrylics LLC
7350 Empire Drive
Florence, KY 41042
USA

www.avonitesurfaces.com

800.428.6648;
505.864.3800;
505.864.7790 fax

PRODUCT DESCRIPTION

COMPOSITION & MATERIALS

Avonite Surfaces is a patented, non-porous homogenous blend of either polyester or acrylic alloys and fillers. This creates a surfacing material that looks like stone but cuts like wood. The grain pattern goes all the way through which allows for three dimensional shaping.

BASIC USES

Because the material can be worked with conventional wood- working power tools, the design possibilities are unlimited. Countertops, wall cladding, furniture, mouldings, architectural signage and accessories can be beautifully created with a guarantee of durability.

LIMITATIONS

Many Avonite Surfaces products are suitable for exterior use. Contact Technical Services regarding limitations and approvals for exterior applications. Do not use in areas exposed to sustained temperatures in excess of 375°F (CI) or 260°F (CIII). Seaming with joint adhesive should not be performed when the ambient temperature of the work area is below 55°F (13°C).

SIZES: Avonite Surfaces Studio Collection™ sheets are available in 36” (915mm) width by 120” (3048mm) length. Foundations™ acrylic solid surfacing is available in 30” (762mm) width by 144” (3658mm) length. Custom sizes are available on special order.

THICKNESS

All Avonite Surfaces sheets are available in standard thickness of 1/2” (12mm). Foundations™ are available in 1/2” (12mm) and 1/4” (6mm) thicknesses.

SHAPED PRODUCTS

Solid surface sinks in kitchen and lavatory models are available in three standard solid colors. Combine with Avonite Surfaces sheets to create a totally integrated solid surface system.

COLORS: A complete selection of granite, gemstone, crystelles, glass and architectural solids are available. Contact your local Distributor for samples. Custom colors can be matched to order for larger projects.

FINISH: The factory finish of Avonite Surfaces is a matte finish approximating 220 grit sandpaper. A satin sheen or a high polish can be obtained by buffing with prescribed polishing compounds.

WEIGHT: Avonite Surfaces sheet stock in 1/2" (12mm) thickness weighs approximately 4.0 lbs. per sq. ft. in the Class I rated materials (CI and F1). Class III sheets weigh approximately 3.1 lbs. in 1/2" (12mm) thickness (G3 and K3).

MAINTENANCE

Avonite Surfaces may be easily cleaned using conventional cleaning agents such as an ammonia based liquid cleaner (glass cleaner). Dry stains on a matte finish can be removed with a Scotch-Brite™ scouring pad by 3M or a mild abrasive cleanser. Burns or scorches can be removed by sanding with coarse grit sandpaper followed by finer grit sandpaper. Follow sanding with a Scotch- Brite™ 7447 red pad by 3M (or equivalent) to match finish of sanded area to surrounding area. A final buffing is required for polished surfaces. Accidental nicks or chips can be repaired with special patch kits available in all standard Avonite Surfaces colors from the Studio Collection.

STAIN AND CHEMICAL RESISTANCE

The test method used was NEMA LD 3-3.9. No lasting effect was noted after the prescribed exposure to 29 common reagents.

SANITARY USE

Avonite Surfaces has been tested and approved by the National Sanitation Foundation (NSF). Its inert and non-porous surface will not support the growth of bacteria and is ideal for food service and health-care facilities.

FABRICATION AND INSTALLATION

Avonite Surfaces should always be fabricated and installed by accredited fabricators. There are over 5,000 authorized fabricators worldwide. A list of qualified craftspeople is available through local Distributors and our website at www.avonitesurfaces.com.

WARRANTY

All Avonite Surfaces products carry either a 10 year limited written material warranty or a 10 year installed warranty when properly installed by an authorized fabricator. In addition, most Avonite Surfaces colors carry a 5 year limited exterior warranty for signage. For copies of Avonite Surfaces warranties, contact ARISTECH ACRYLICS LLC or an authorized Distributor.

AVAILABILITY

Avonite Surfaces is available through stocking Distributors in most major cities throughout the world. Contact Aristech Acrylics LLC for specific locations.

TECHNICAL SUPPORT AND SERVICES

Contact Aristech Acrylics LLC, in the USA toll-free at 800.866.8324 or 505.864.3800. FAX 505.864.7790.

SECTION 06650

SOLID POLYMER FABRICATIONS

PART 1 — GENERAL

1.01

SUMMARY

A. Section includes: Furnishing and installing Avonite Surfaces™ products, as indicated and as specified.

B. Work Specified in this Section:

1. Countertops, sinks, splashes and shelves.
2. Toilet partitions, wainscot, wall panels and window sills.
3. One piece vanity tops and sink bowls.
4. One piece kitchen tops and sink bowls.
5. Shower/tub enclosures.
6. Drilling of holes as required.
7. Installation of above listed items.

C. Related Work:

1. Supports for countertops and sinks.
2. Plumbing piping and trim.
3. Cabinet and fixture work.

1.02

REFERENCES

A. American Society for Testing and Materials (ASTM): C501 Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abrader.

D256 Impact Resistance of Plastics and Electrical Insulating Materials.

D570 Water Absorption of Plastics.

D638 Tensile Properties of Plastics.

D696 Coefficient of Linear Thermal Expansion of Plastics.

D2583 Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

E84 Surface Burning Characteristics of Building Materials.

B. National Electrical Manufacturers Association (NEMA) LD.3 High Pressure Decorative Laminates.

1.03

SUBMITTALS

A. Samples: If colors are indicated on drawings, submit an 8" square sample of each selected color. If colors are not indicated on drawings, submit manufacturer's standard color book showing colors of actual material in not smaller than 1-1/2" (36mm) size. Following selection of colors, submit samples as specified above.

B. Shop Drawings: Fabricator shall provide detailed and dimensioned shop drawings showing all details of fabrication, edging, sink installation, coving, and seams. Indicate fastener types and locations, sealant proposed for use, and fabrication details of support brackets.

C. Manufacturer's Instructions: Submit complete manufacturer's fabrication and installation instructions.

D. Upon completion, furnish the Owner one set of manufacturer's recommended cleaning procedures.

1.04

QUALITY ASSURANCE

A. Where homogeneous plastic or solid polymer is indicated on drawings, the material shall be "Avonite Surfaces," manufactured by ARISTECH ACRYLICS LLC, 7350 Empire Drive, Florence, KY 41042, 800-428-6648.

B. Installer Qualifications: Installation of Avonite Surfaces shall be by a firm that is authorized by Avonite Surfaces to fabricate and install Avonite Surfaces, and that can demonstrate successful experience in installing finished carpentry items similar in type and quality to those required for this project.

1.05

DELIVERY, STORAGE AND HANDLING

A. Transport and handle sheets and fabricated items by methods that will prevent damage and defacing.

B. Storage: If units are not installed immediately upon delivery to site, store in covered location, off the ground or floor, and cover with moisture- and stain-resistant paper or plastic.

1.06

ENVIRONMENTAL CONDITIONS

Obtain and comply with Avonite Surfaces advice for optimum temperature and humidity conditions for Avonite Surfaces during its storage and installation.

1.07

WARRANTY

Furnish the manufacturer's ten year warranty against defective materials and workmanship.

PART 2 — PRODUCTS

2.01

MATERIAL

A. General: Avonite Surfaces shall be non-porous, homogeneous blend of polyester or acrylic alloys and fillers to create a material that cuts like wood. The color and pattern shall extend throughout the material. The material shall be in 1/4" (6mm) or 1/2" (12mm) thickness as indicated, in one piece wherever possible.

B. Properties: The material shall conform to the following properties:

TECHNICAL DATA PROPERTY	TYPICAL VALUES					TEST METHOD
	STUDIO CLASS I	FOUNDATIONS™ ACRYLIC	STUDIO CLASS III	CRYSTELLE CLASS I	CRYSTELLE CLASS III	
Specific Gravity	25.5	27.7	19.5	27.0	20.6	(grams/cu. in.)
Hardness	55	60	45	58	45	ASTM D2583
Elongation (percent)	0.42	2.2	0.55	0.36	0.38	ASTM D638
Tensile strength (psi)	4,200	4,200	3,000	3,520	2,440	ASTM D638
Tensile modulus	11x10 ⁵	11x10 ⁵	5x10 ⁵	11x10 ⁵	6.5x10 ⁵	ASTM D638
Abrasion resistance @ 1000 cycles, grams	0.4	—	0.4	0.9	0.5	ASTM C501
Water absorption after 24 hours, percent	.06	.07	.08	.05	.03	ASTM D570
Izod impact foot pounds per inch	0.2	0.3	0.2	0.3	0.2	ASTM D256
Impact resistance 1/2 pound	No fracture	No fracture	No fracture	No fracture	No fracture	NEMA LD3- 3.3
Linear thermal expansion	1.8x10 ⁻⁵	2.0x10 ⁻⁵	3.4x10 ⁻⁵	2.4x10 ⁻⁵	3.3x10 ⁻⁵	ASTM D696
High temperature resistance	No effect	Slight effect	No effect	No effect	No effect	NEMA LD3- 3.6
Boiling water resistance	No effect	No effect	No effect	No effect	No effect	NEMA LD3- 3.5
Stain resistance	No effect	No effect	No effect	No effect	No effect	NEMF LD3- 3.9
Weight per sq. ft., 1/2" (12mm) thickness, pounds	4.0	4.4	3.1	4.0	3.1	
Flame spread classification	I	I	III	I	III	ASTM E84

C. Fabrication and Installation Materials.

1. Joint Adhesive: Type recommended by manufacturer, in color to match Avonite Surfaces.
2. Silicone sealant: Type recommended by manufacturer.

2.02

FABRICATION

- A. Avonite Surfaces shall be fabricated by an authorized Avonite Surfaces fabricator.
- B. Avonite Surfaces countertops shall be the thickness indicated, one piece wherever possible, and with flush joints sealed with joint adhesive where required. Avonite Surfaces guarantees color match within the crate. Follow Avonite Surfaces standard "Color Matching" procedures (see Fabrication Manual) when joining sheets from outside the crate. Shop shall fabricate in the largest sections possible for transporting and building access.
- C. Ease top and front edges and corners.
- D. Avonite Surfaces paneling and shower/tub enclosures shall be fabricated of 1/4" (6mm) thick material unless otherwise indicated. Vertical seams in shower/tub enclosures and other wet areas shall be joined as detailed.
- E. Avonite Surfaces shall be fabricated to field measurements. Seams shall be located where shown on approved shop drawings. Provide seam blocks under all seams where necessary in accordance with manufacturer's recommendations.
- F. Edge detail shall be as selected by Architect or Designer.

- G. Backsplash height shall be according to detail provided.
- H. Back splashes shall be field installed, with tight, sealed joints. or, paragraph below is extra cost option
- I. Coves: Provide shop fabricated integrally molded coves at back and ends where against walls or other vertical surfaces, with 3/8" radius between top and splash. I. Finish of exposed surfaces shall be (matte, satin or polished) according to the methods prescribed by the manufacturer.
- J. Sinks shall be selected from manufacturer's standard sink designs and colors, and shall be formed integrally into countertops. or, use paragraph below if sinks are material other than Avonite Surfaces
- K. Cutouts for sinks furnished by others shall be smooth and uniform without saw marks. The top and bottom of sink openings shall be finished smooth. Corners of sink cutouts must be a minimum of 1/4" (6mm) radius.

PART 3 - EXECUTION

3.01

EXAMINATION

Verify that counters and supports are suitable for installation in accordance with shop drawings.

3.02

INSTALLATION

- A. Install tops in locations indicated, conforming to manufacturer's recommended installation procedures. Set tops on supports, and anchor using fasteners shown on approved submittals.
- B. Use silicone sealant for attaching back splashes and reveal edges. Seal all joints with sealant.
- C. Field joints shall be hard seamed unless otherwise specified.

3.03

CLEANING

At completion of work, remove all excess material, dirt, dust, trash and other materials resulting from the installation. Clean surfaces of Avonite Surfaces, remove all labels and leave the area clean.

3.04

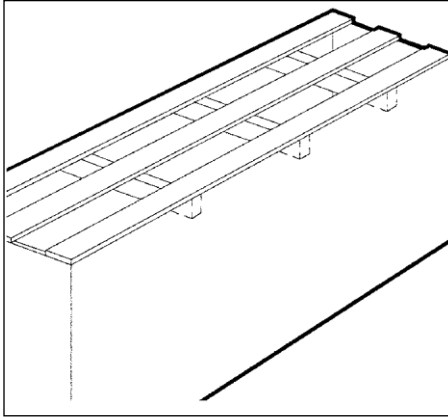
PROTECTION

Provide suitable protection on counters and other Avonite Surfaces to protect the installation from damage until final acceptance. Place temporary covers over Avonite Surfaces sinks to preclude their use for construction purposes.

RECOMMENDED SUBSTRATES

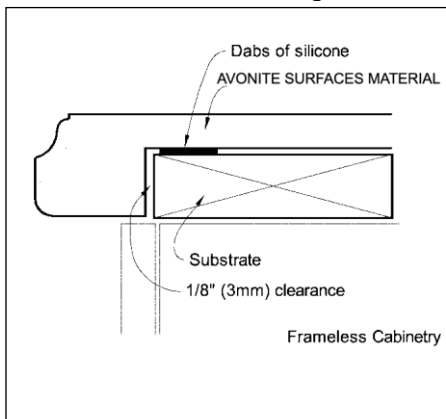
The illustrations shown below demonstrate typical substrate requirements needed to properly support Avonite Surfaces™ materials. As a general rule, solid substrates should be used only for furniture or vanity tops, or overhangs where heat sources are not present.

RUNNER METHOD

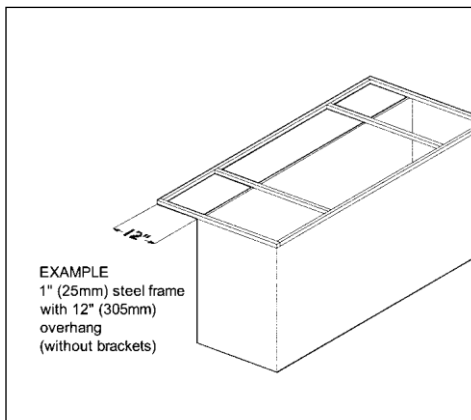
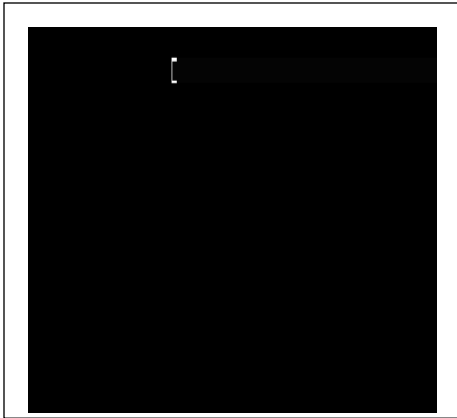


The runner method uses 1"x4" supports that run parallel to the length of the cabinets. These supports are placed in the front, center and rear and require cross supports every 18"-24" (45-60cm). These supports should be mechanically secured to cabinets.

Frameless cabinets require the thickness of the top edge to clear doors and drawer fronts.



COOKTOP OVERHANGS



Drawings available for download at www.avonitesurfaces.com in either .dwg or .pdf format.

For overhangs exceeding 6" (72mm) and where heat sources are present, use steel tubing. For example: a kitchen island with a cooktop and overhang.

Steel frame should be mechanically secured to the cabinetry which will provide a cantilevered support.

COMMERCIAL FOOD SERVICE TOPS

The following features must be included in a commercial food service installation in order to be covered by the Avonite Surfaces' 10-Year Material and/or Installed Warranty. Color must be selected from among the Avonite Surfaces' Class I fire rated products.

1. Cabinet must be even and level with no protrusions to cause cracking.
2. Support tops every 18" (45.7cm). Cantilevers over 6" (15.2cm) require structural support. Provide support within 3" (7.6cm) of all cut outs.
3. Hot and cold units must be supported from below and not rest on the Avonite Surfaces top.
4. Attach the Avonite Surfaces material to support frame with dabs of silicone every 18"-24"
5. Separate tops containing hot sections from those with cold sections. A soft (silicone) seam may be used.]
6. Make cut outs with router and template and allow a 1/2" (12mm) radius in the corners. Cut and sand a 1/8" (3mm) round over on top and bottom edge of cut out.
7. Reinforce corners of rectangular cut outs with 6"x 6" (15.2x15.2cm) blocks of the Avonite Surfaces. Circular cut outs must have a continuous ring of the Avonite Surfaces 2" (5cm) wide material as reinforcement.
8. Use a layer of Thermo-Flow tape to line the perimeter of all hot and cold cut outs.
9. Hot well units must be covered with a layer of Flex-Sulation blended PVC foam sheeting. The foam may be attached to the hot well with 3M® double sided aircraft tape, or duct tape.
10. Cabinets are to be ventilated by installing a fan near the bottom to pull cool air into the cabinet and by providing vent slots near the upper edge of the cabinet to expel the hot air. Temperatures in the cabinet must not exceed 170°F (78°C).
11. Sneeze guards must be fastened to the cabinets or the floor, not directly to the Avonite Surfaces material. Holes in the Avonite Surfaces to accommodate the sneeze guard supports must be cut 1/4" (.6cm) oversize in diameter to allow for expansion and contraction.
12. Deck seams must be reinforced with a 3"- 4" (7.6-10cm) seam block. Keep seams 3" (7.6cm) or more away from cutouts.

If you have any questions, please call the Avonite Surfaces Technical Service Department at 1.800.866.8324.

Short Form Specification

SECTION 06650

SCOPE OF WORK

Provide Avonite Surfaces TM as shown on the drawings and specifications herein:

MATERIALS

Avonite Surfaces sheets shall be as supplied by Aristech Acrylics LLC, Florence, Kentucky, and shall be cut to size, seamed and detailed in accordance with approved shop drawings. Color shall be (specify) _____ . and surface finish shall be (matte, satin, gloss) _____

SHOP DRAWINGS

Prior to fabrication, the contractor shall furnish and submit detailed shop drawings for the approval of the architect/designer, showing accurate dimensions and details of all Avonite Surfaces solid surface work.

FABRICATION AND INSTALLATION

The fabrication and installation of all Avonite Surfaces detailed in this section shall be performed by an Accredited Fabrication shop in accordance with the manufacturer's printed instructions and final shop drawings.