

**(Specifier Note:** The purpose of this guide specification is to assist the specifier in correctly specifying solid surface countertops including sinks and backsplashes.

The specifier needs to edit these guide specifications to fit the needs of each specific project. Contact an Avonite Surfaces® representative to assist in appropriate product selections. Throughout the guide specification, there are Specifier Notes to assist in the editing of the file.

References have been made within the text of the specification to MasterFormat 2004 Section numbers and titles; specifier needs to coordinate these numbers and titles with sections included for the specific project. Brackets []; "AND/OR"; and "OR" have been used to indicate when a selection is required. Some options may require additional lead-time, if this is a consideration, contact an Avonite Surfaces® representative for assistance.

Specifier may elect to incorporate portions of this guide specification into a Division 06 section that includes casework. )

**SECTION 12 36 00**  
**COUNTERTOPS**  
AVONITE SURFACES®

PART 1 - GENERAL

1.1 SECTION INCLUDES

**(Specifier Note:** MAINTAIN types of countertop that are specific to project.)

- A. Countertops
- B. Integral sinks
- C. Splashes

1.2 REFERENCES

- A. ASTM International
  - 1. ASTM C 501; Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser.
  - 2. ASTM D 256; Impact Resistance of Plastics and Electrical Insulating Materials.
  - 3. ASTM D 570; Water Absorption of Plastics.

4. ASTM D 638; Tensile Properties of Plastics.
5. ASTM D 696; Coefficient of Linear Thermal Expansion of Plastics.
6. ASTM D 2583; Indentation Hardness of Rigid Plastics by Means of a Barcol Impresser.

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

### 1.3 SUBMITTALS

A. Refer to Section [01 33 00 Submittal Procedures] [Insert section number and title].

B. Product Data: Submit manufacturer's current product literature for each product indicated.

C. Samples: [Provide a six-inch square color sample for products indicated.] [Provide color book showing colors of actual material in no less than 1-1/2 inch size, if products are not indicated.]

D. Shop Drawings: Include details, and attachments to other work.

1. Submit shop drawings showing seams, termination points, and details of edges.
2. Submit coordination drawings indicating electrical and plumbing work.

E. LEED Submittal:

*(Specifier Note: MAINTAIN appropriate LEED submittal requirements when project is to be LEED registered.)*

1. Credit EQ 4.1 Indoor Air Quality  
Manufacturer's product data for installation adhesives, including printed statement of VOC content and material safety data sheets.
2. Credit MR 4.1 or 4.2 Materials and Resources  
Manufacturer to provide third party certification of 40% recycled content
3. Credit MR 5.1 Regional Materials.  
Product data indicating that materials are regionally manufactured within 500 miles.
4. Credit ID 1-4 Innovative Design  
Solid surface products are extremely durable with an extensive life cycle and can be reused in new applications. Selecting custom sized products can lower costs and reduce waste.

F. Manufacturer Instructions: Provide manufacturer's written installation instructions.

- G. Installer Certification: Submit a signed copy of the installer's certificate, acknowledging the employee has been trained and approved by manufacturer.
- H. Closeout Submittals
  - 1. Refer to Section [01 78 00 Closeout Submittals] [Insert section number and title].

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer authorized installer shall fabricate and install solid surface products, and demonstrate successful experience in installing finished carpentry items similar in type and quality to those required for this project.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Refer to Section [01 60 00 Product Requirements] [Insert section number and title].
- B. Deliver sheets, fabricated items, materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Store solid surface products and accessories as recommended by manufacturer.

### PART 2 - PRODUCTS

*(Specifier Note: Product information is proprietary to Avonite Surfaces®. If additional products are required for competitive procurement, contact Avonite Surfaces® for assistance in listing competitive products that may be available.)*

#### 2.1 MANUFACTURER

- A. Avonite Surfaces® by Aristech Acrylics LLC; 7350 Empire Drive Florence, KY 41042, USA; Phone 1.800.354.9858 or 859.283.1501, fax 859.283.7378; website [www.avonitesurfaces.com](http://www.avonitesurfaces.com).

#### 2.2 SOLID SURFACE MATERIAL

*(Specifier Note: Using a basis of design is acceptable when writing a proprietary specification or when including accepted equivalent products. Some of the Studio Collection materials have a minimum of 40% recycled content; some of the*

*Foundations line materials have a minimum of 15% recycled content. MAINTAIN the project specific products. )*

- A. Basis of Design: [Studio Class I] [Crystelle Class I] [Studio Class III] [Crystelle Class III] [Foundations Acrylic] by Avonite Solid Surfaces®
- B. Description: Non-porous, homogeneous material maintaining the same composition throughout the part with a composition of polyester or acrylic polymer, aluminum trihydrate filler and pigment.
- C. Thickness: [1/2 inch] [3/4 inch]
- D. Color: [Insert color] [To be selected by Architect] [As indicated on Drawings]
  - 1. [See Avonite Colorizer](#)

*(Specifier Note: Most standard solid surface materials are only available in 30 and 36-inch wide sheets. These sheet sizes may produce enormous amounts of waste. Through the use of Avonite Surfaces Wide Sheet Size products, waste is minimized and joints are eliminated. For large jobs, Avonite Surfaces Custom Size Sheet Program assists the designer and contractor in cutting costs, reducing waste and saving time. Other manufacturers may offer wide and custom sheet size options for project requiring competitive pricing. Verify availability.)*

- E. Sheet Size: [Custom Size Calculator](#) [ Insert Sheet Size]

*(Specifier Note: Listed characteristics are minimum standards for the solid surface industry. MAINTAIN the performance characteristics of the material selection. DELETE performance characteristics of materials not project specific.)*

- F. Performance Characteristics based on ½ inch thickness: (STUDIO CLASS I)
  - 1. Specific Gravity: 25.5 grams/cu. in.
  - 2. Hardness: 55, when tested in accordance with ASTM D2583
  - 3. Elongation: 0.42%, when tested in accordance with ASTM D638
  - 4. Tensile strength: 4,200psi, when tested in accordance with ASTM D638
  - 5. Tensile Modulus:  $11 \times 10^5$ , when tested in accordance with ASTM D638
  - 6. Abrasion Resistance at 1000 cycles: 0.4 grams, when tested in accordance with ASTM C501
  - 7. Water Absorption after 24 hours: .06%, when tested in accordance with ASTM D570
  - 8. Izod Impact Foot Pounds per Inch: .02, when tested in accordance with ASTM D256
  - 9. Impact Resistance 1/2 Pound: No Fracture, when tested in accordance with NEMA LD3-3.3
  - 10. Linear Thermal Expansion:  $1.8 \times 10^{-5}$ , when tested in accordance with ASTM D696

11. High Temperature Resistance: No Effect, when tested in accordance with NEMA LD3-3.6
12. Boiling Water Resistance: No Effect, when tested in accordance with NEMA LD3-3.5
13. Stain Resistance: No Effect, when tested in accordance with NEMA LD3-3.9
14. Weight per sq. ft., 1/2 inch thickness: 4.0 pounds

**(Specifier Note: DELETE requirement for recycled content when selected product doesn't meet the criteria or when not required for project.)**

15. Recycled Content: Minimum 40%

G. Performance Characteristics based on 1/2 inch thickness **(CRYSTELLE CLASS I)**

1. Thickness: 1/2 inch (12.7mm) when tested in accordance with ASTM
2. Specific Gravity: 27.0 grams/cu. in.
3. Hardness: 58, when tested in accordance with ASTM D2583
4. Elongation: 0.36%, when tested in accordance with ASTM D638
5. Tensile strength: 3,520psi, when tested in accordance with ASTM D638
6. Tensile Modulus:  $11 \times 10^5$  when tested in accordance with ASTM D638
7. Abrasion Resistance at 1000 cycles: 0.9 grams, when tested in accordance with ASTM C501
8. Water Absorption after 24 hours: .05%, when tested in accordance with ASTM D570
9. Izod Impact Foot Pounds per Inch: .03, when tested in accordance with ASTM D256
10. Impact Resistance 1/2 Pound: No Fracture, when tested in accordance with NEMA LD3-3.3
11. Linear Thermal Expansion:  $2.4 \times 10^{-5}$ , when tested in accordance with ASTM D696
12. High Temperature Resistance: No Effect, when tested in accordance with NEMA LD3-3.6
13. Boiling Water Resistance: No Effect, when tested in accordance with NEMA LD3-3.5
14. Stain Resistance: No Effect, when tested in accordance with NEMA LD3-3.9
15. Weight per sq. ft., 1/2 inch thickness: 4.0 pounds

H. Performance Characteristics based on 1/2 inch thickness **(STUDIO CLASS III)**

1. Thickness: 1/2 inch (12.7mm) when tested in accordance with ASTM
2. Specific Gravity: 19.5 grams/cu. in.
3. Hardness: 45, when tested in accordance with ASTM D2583
4. Elongation: 0.55%, when tested in accordance with ASTM D638
5. Tensile strength: 3,000psi, when tested in accordance with ASTM D638
6. Tensile Modulus:  $5 \times 10^5$  when tested in accordance with ASTM D638

7. Abrasion Resistance at 1000 cycles: 0.4 grams, when tested in accordance with ASTM C501
8. Water Absorption after 24 hours: .08%, when tested in accordance with ASTM D570
9. Izod Impact Foot Pounds per Inch: .02, when tested in accordance with ASTM D256
10. Impact Resistance 1/2 Pound: No Fracture, when tested in accordance with NEMA LD3-3.3
11. Linear Thermal Expansion:  $3.4 \times 10^{-5}$ , when tested in accordance with ASTM D696
12. High Temperature Resistance: No Effect, when tested in accordance with NEMA LD3-3.6
13. Boiling Water Resistance: No Effect, when tested in accordance with NEMA LD3-3.5
14. Stain Resistance: No Effect, when tested in accordance with NEMA LD3-3.9
15. Weight per sq. ft., 1/2 inch thickness: 3.1 pounds

*(Specifier Note: DELETE requirement for recycled content when selected product doesn't meet the criteria or when not required for project. Verify available colors that contain minimum recycled content.)*

16. Recycled Content: Minimum 40%
  - I. Performance Characteristics based on ½ inch thickness (CRYSTELLE CLASS III)
    1. Thickness: 1/2 inch (12.7mm) when tested in accordance with ASTM
    2. Specific Gravity: 20.6 grams/cu. in.
    3. Hardness: 45, when tested in accordance with ASTM D2583
    4. Elongation: 0.38%, when tested in accordance with ASTM D638
    5. Tensile strength: 2,440psi, when tested in accordance with ASTM D638
    6. Tensile Modulus:  $6.5 \times 10^5$  when tested in accordance with ASTM D638
    7. Abrasion Resistance at 1000 cycles: 0.5 grams, when tested in accordance with ASTM C501
    8. Water Absorption after 24 hours: .03%, when tested in accordance with ASTM D570
    9. Izod Impact Foot Pounds per Inch: .02, when tested in accordance with ASTM D256
    10. Impact Resistance 1/2 Pound: No Fracture, when tested in accordance with NEMA LD3-3.3
    11. Linear Thermal Expansion:  $3.3 \times 10^{-5}$ , when tested in accordance with ASTM D696
    12. High Temperature Resistance: No Effect, when tested in accordance with NEMA LD3-3.6
    13. Boiling Water Resistance: No Effect, when tested in accordance with NEMA LD3-3.5
    14. Stain Resistance: No Effect, when tested in accordance with NEMA LD3-3.9

15. Weight per sq. ft., 1/2 inch thickness: 3.1 pounds

J. Performance Characteristics based on 1/2 inch thickness: **(FOUNDATIONS)**

1. Specific Gravity: 27.7 grams/cu. in.
2. Hardness: 60, when tested in accordance with ASTM D2583
3. Elongation: 2.2%, when tested in accordance with ASTM D638
4. Tensile strength: 4,200psi, when tested in accordance with ASTM D638
5. Tensile Modulus:  $11 \times 10^5$ , when tested in accordance with ASTM D638
6. Water Absorption after 24 hours: .07%, when tested in accordance with ASTM D570
7. Izod Impact Foot Pounds per Inch: .03, when tested in accordance with ASTM D256
8. Impact Resistance 1/2 Pound: No Fracture, when tested in accordance with NEMA LD3-3.3
9. Linear Thermal Expansion:  $2.0 \times 10^{-5}$ , when tested in accordance with ASTM D696
10. High Temperature Resistance: Slight Effect, when tested in accordance with NEMA LD3-3.6
11. Boiling Water Resistance: No Effect, when tested in accordance with NEMA LD3-3.5
12. Stain Resistance: No Effect, when tested in accordance with NEMA LD3-3.9
13. Weight per sq. ft., 1/4 inch thickness: 4.4 pounds

**(Specifier Note: DELETE requirement for recycled content when selected product doesn't meet the criteria or when not required for project. Verify available colors that contain minimum recycled content.)**

14. Recycled Content: Minimum 15%

## 2.3 ACCESSORIES

**(Specifier Note: Silicone Sealant is specially color matched to the Avonite product line to provide the appearance of continuity at corner joints.)**

- A. Silicone Sealant: Mildew-resistant, FDA-compliant sealant recommended by manufacturer, in color to match solid surface.
- B. Sink: [\[Integral sink\]](#) [\[Under-mount sink\]](#) [\[Drop-in sink\]](#)

## 2.4 FABRICATION

- A. Solid surface shall be factory fabricated by an authorized fabricator.
- B. Fabricate countertops, sinks, and splash of 1/2 inch (12.7mm) thick material unless otherwise indicated.

- C. Solid surface shall be fabricated to field measurements.
- D. Cut and finish component edges with clean, sharp returns.
- E. Finished edges shall have a 1/16 inch radius

*(Specifier Note: Splash surfaces are typically separate pieces. Integral splash fabricated with the countertop will typically be an additional cost. DELETE statement when splash is fabricated separately, or when no flash is required. )*

- F. Integral Cove: 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.

*(Specifier Note: MAINTAIN integral sink when project specific. DELETE when undermount, drop-in or no sink is required for project. )*

- G. Integral Sinks shall be selected from manufacturer's standard sink designs and colors, and shall be formed integrally with countertops.

*(Specifier Note: MAINTAIN cutout requirements when undermount or drop-in sink are project specific. DELETE when no cutouts are required or when integral sink is specified. )*

- H. Cutouts for sinks [and other accessories] shall be smooth and uniform without saw marks. The top and bottom of openings shall be finished smooth.
- I. Maintain minimum ¼ inch (6mm) radius for sink cutouts.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Inspect materials and location of installation for conditions affecting performance of work in accordance with shop drawings.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install solid surfaces in accordance with manufacturer's installation guidelines and recommendations.
- B. Field cut countertop as required for plumbing fixtures and bath accessories.



- C. Cure countertops for 24 hours, minimum, before exposure to moisture or pressure.
- D. Corner joints: Form 1/8-inch-wide joints, sealed with manufacturer's color-matching silicone sealant.
- E. Back splashes: Field install with tight, sealed joints.
- F. Field joints shall be hard seamed unless otherwise specified.
- G. Attach solid surfaces material to leveled supports on frame with dabs of silicone every 18"-24"
- H. Fasten solid surface material to frame by anchoring screws to supports at all corner blocks. Screws should not come in contact with solid surface material, as this may cause cracking of countertop.

### 3.3 CLEANING AND PROTECTION

- A. Remove adhesives, sealants and other stains.
- B. Protect installed wall cladding from damage. Repair or replace damaged work, to Architects satisfaction.

END OF SECTION