

SECTION 12 3661 SOLID SURFACING COUNTERTOPS

This Section specifies “Wilsonart® Solid Surface” countertops produced by Wilsonart LLC. Wilsonart Solid Surface is an acrylic resin based solid surfacing material available in over 50 colors and designs.

Wilsonart Solid Surface is highly resistant to stains, easy to maintain, and FDA approved for food preparation areas. LEED-CI points are available for the Commercial Interiors category. Wilsonart Solid Surface has attained GREENGUARD Certification from UL Environment for low chemical emissions into indoor air during product usage.

Material composition allows the inclusion of sculpted and layered edge treatments as design enhancements. Wilsonart also offers a complete line of cast solid surface sinks and vanities including ADA-compliant designs, to complement countertops.

Wilsonart offers a 10 year Commercial Limited Warranty for material defects.

Section Editing: Informational notes will appear as “Editing Note” text boxes throughout this Section. Bracketed bold text will require a selection to be made.

PART 1 - GENERAL

1.1 SECTION INCLUDES

EDITING NOTE: Revise listing to suit Project requirements.

- A. Solid surfacing countertops.
- B. Solid surfacing sinks.
- C. Solid surfacing millwork and window sills.
- D. Adhesives and sealants.

1.2 RELATED REQUIREMENTS

EDITING NOTE: Section listings below are common references and based on the broadly accepted CSI MasterFormat® for Section numbers and titles. Revise to suit requirements for particular project.

- A. Section 01 3000 - Submittals.
- B. Section 01 7800 - Closeout Submittals.
- C. Section 05 5000 - Metal Fabrications.
- D. Section 06 1000 - Rough Carpentry.
- E. Section 06 6116 - Solid Surfacing Fabrications.
- F. Section 12 3623 - Plastic-Laminate-Clad Countertops.
- G. Division 22 - Plumbing Sections.

1.3 REFERENCES

EDITING NOTE: Revise Reference Standards to suit project requirements.

A. Reference Standards:

1. ANSI Z124.3: American National Standard for Plastic Lavatories.
2. ANSI Z124.6: American National Standard for Plastic Sinks.
3. ASTM C 834: Standard Specification for Latex Sealants.
4. ASTM C 920: Standard Specification for Elastomeric Joint Sealants.
5. ASTM D 256: Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics.
6. ASTM D 570: Standard Test Method for Water Absorption of Plastics.
7. ASTM D 638: Standard Test Method for Tensile Properties of Plastics
8. ASTM D 696: Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C with a Vitreous Silica Dilatometer.
9. ASTM D 790: Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
10. ASTM D 792: Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
11. ASTM D 2583: Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.
12. ASTM E 84: Standard Test Method for Surface Burning Characteristics of Building Materials.
13. ASTM G 21: Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
14. ASTM G 22: Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Bacteria.
15. ASTM G 155: Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.
16. NEMA LD-3: High Pressure Decorative Laminates.
17. NSF/ANSI Standard 51: Food Equipment Materials.
18. SCAQMD Rule 1168: Adhesive and Sealant Applications.
19. UL 2818: GREENGUARD Certification Program for Chemical Emissions for Building Materials, Finishes and Furnishings.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 3000 - Submittals.

B. Product Data:

1. Submit product data for each specified product. Include manufacturer's technical data sheets and published instruction instructions.
2. Submit Material Safety Data Sheets (MSDS) for adhesives and sealants.

C. Shop Drawings:

1. Submit fully dimensioned shop drawings showing countertop **[and window sill]** layouts, joinery, terminating conditions, substrate construction, cutouts and holes. Show plumbing installation provisions. Include elevations, section details, and large scale details.

- D. Samples:
 - 1. Submit selection and verification samples for each color, pattern, and finish required.
- E. Quality Assurance Submittals:
 - 1. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties, if required.
 - 2. LEED Submittals: Submit applicable LEED documentation for potential credits specified in this Section.
 - 3. Warranty: Specimen copy of specified warranty.
- F. Maintenance Data: Submit manufacturer's published maintenance manual with closeout submittals.

1.5 REGULATORY REQUIREMENTS

- A. Accessibility Requirements: Comply with the U.S. Architectural & Transportation Barriers Compliance Board ADA-ABA Accessibility Guidelines for Buildings and Facilities.
- B. Adhesives, Sealants, and Sealant Primers:
 - 1. SCAQMD (South Coast Air Quality Management District) Rule 1168.

1.6 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Fabricator Qualifications: Minimum of three years documented experience in fabricating solid surfacing countertops similar in scope and complexity to this Project. Currently certified by the manufacturer as an acceptable fabricator.
 - 2. Installer Qualifications: Minimum of three years documented installation experience for projects similar in scope and complexity to this Project, and currently certified by the manufacturer as an acceptable installer. **[Installer shall be the fabricator].**

EDITING NOTE: Following two LEED paragraphs offer potential credits according to LEED 2009 for Commercial Interiors (LEED-CI). Coordinate with designated LEED AP for credits applicable to Project.

- B. LEED 2009 rating system potential credits for solid surfacing:
 - 1. LEED-CI MR Credit 1.2 Building Reuse - Maintain Indoor Nonstructural Elements.
 - 2. LEED-CI MR Credit 3.1 - Materials Reuse.
- C. LEED 2009 rating system potential credits for adhesives:
 - 1. LEED-CI IEQ Credit 4.1 Low-Emitting Materials - Adhesives and Sealants.

D. Mock-Ups:

EDITING NOTE: Revise mock-up size and location to suit Project requirements.

1. Install at Project using acceptable products and manufacturer approved installation methods. Obtain Architect's acceptance of color, pattern, finish, fabrication, and installation standards.
2. Mock-Up Size: [_____] by [_____].
3. Mock-Up Size: Indicated on Drawings.
4. Mock-Up Location: **[Indicated on Drawings] [As directed by Architect]**.
5. Maintain mock-up during construction for fabrication and installation comparison. If required, remove and legally dispose of mock-up when no longer required.
6. Incorporation: If permitted by Architect, mock-up may be incorporated into as part of the completed Work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver sinks in original containers.
- B. Storage and Protection: Store materials protected from exposure to harmful weather conditions, at temperature and humidity conditions recommended by manufacturer. Store sheet materials flat on pallets or similar rack-type storage to preclude damage.

1.8 PROJECT CONDITIONS

- A. Field Measurements: Verify actual measurements and openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.
- B. Adhesive: Acclimatize adhesives to occupancy room temperatures with maximum temperature not to exceed 75 deg F.

1.9 WARRANTY

- A. Manufacturer's Limited Warranty: Provide manufacturer's standard 10 Year Commercial Limited Warranty against defects in solid surface sheet materials.

PART 2 - PRODUCTS

EDITING NOTE: Full Contact Information: Wilsonart, 2501 Wilsonart Drive, Temple, TX 76504. Tel. 254.207.7000, Toll-Free 800.433.3222, Fax 254.207.2384. Websites are:
www.wilsonart.com (primary website)
<http://sustain.wilsonart.com> (sustainable design website)

2.1 MANUFACTURER

- A. Basis of Design: Wilsonart LLC.

2.2 SOLID SURFACE SHEET MATERIAL

- A. Acceptable Product: "Wilsonart Solid Surface."
- B. Composition: Acrylic resins, fire-retardant mineral fillers, and proprietary coloring agents. Through-the-body color for full thickness of sheet material.

EDITING NOTE: Solid surface sheet material in 1/2 inch thickness is typically used for horizontal applications, such as countertops, vanity tops, laboratory bench tops, millwork, and window sills. Standard countertop sheet material dimensions are 30 inches wide by 145 inches long.

- C. Material Thickness: 1/2 inch, nominal.
- D. Conformance Standards:
 - 1. UL 2818:
 - a. GREENGUARD - Emission levels in UL 2818, Section 7.1 are applicable for furniture products.
 - b. GREENGUARD Gold - Emission levels in UL 2818, Section 7.2 are applicable for building materials, finishes, and furnishings.
- E. Physical Characteristics:

EDITING NOTE: Tensile strength and flexural strength values listed are approximate and based on sample populations from our solid designs. These values may vary slightly depending color/pattern/finish selection(s). For additional detail on a specific design or particulate structure, you may contact Technical and Fabrication Services. High temperature resistance tests may have a slight effect on the material surface; this can be corrected (renewed) to "No Effect."

- 1. Tensile Strength: **[6800 psi]**; ASTM D 638.
- 2. Tensile Modulus: **[1.5 x 10⁶ psi]**; ASTM D 638.
- 3. Tensile Elongation: 0.4 percent minimum; ASTM D 638.
- 4. Flexural Strength: **[10,000 psi]**; ASTM D 790.
- 5. Flexural Modulus: **[1.5 x 10⁶ psi]**; ASTM D 790.
- 6. Thermal Expansion Coefficient: 1.37 x 10⁵ in./in.^oF; ASTM D 696.
- 7. Hardness (Barcol Impressor): 55-62; ASTM D 2583.
- 8. Impact Resistance: **[144 in.]** drop with no fracture; NEMA LD-3, Method 3.8.
- 9. Izod Impact: 0.28 (ft-lb.)/in.; ASTM D 256, Method A.
- 10. Light Resistance - Xenon: No effect; NEMA LD-3, Method 3.3.
- 11. Stain Resistance: Pass; ANSI Z 124.3, modified.
- 12. Wear and Cleanability: Pass; ANSI Z 124.3.
- 13. Fungi Resistance: Pass; ASTM G 21.
- 14. Bacterial Resistance: Pass; ASTM G 22.
- 15. Boiling Water Resistance: No effect; NEMA LD-3, Method 3.5.
- 16. High Temperature Resistance: No effect; NEMA LD-3, Method 3.6.
- 17. Weatherability: Delta E less than 5; ASTM G 155.
- 18. Moisture Absorption: Less than 0.25 percent; ASTM D 570, long term.
- 19. Specific Gravity: **[1.7 gram/cm³]**; ASTM D 792.

- 20. Weight: **[4.4 lb./ft²]**.
- 21. Surface Burning Characteristics: Class I and Class A; ASTM E 84.

EDITING NOTE: Select color, pattern, and finish design from one of the following options. Note: Surface finish options are matte, satin, semigloss, gloss, and high gloss. Durability (maintenance) increases as sheen value increases.

- F. Color, Pattern, and Finish Design: [_____].
- G. Color, Pattern, and Finish Design: Specified in SCHEDULE Article of this Section.
- H. Color, Pattern, and Finish Design: Indicated on Drawings.
- I. Color, Pattern, and Finish Design: Selected from manufacturer's standard offerings.

EDITING NOTE: Select edge detail from one of the following options.

- J. Edge Detail: [_____].
- K. Edge Detail: Specified in SCHEDULE Article of this Section.
- L. Edge Detail: Indicated on Drawings.
- M. Edge Detail: Selected from manufacturer's standard offerings.

2.3 INTEGRATED SOLID SURFACE CAST SINKS

- A. Acceptable Product: "Wilsonart Solid Surface Cast Sinks."
- B. Composition: Acrylic-modified resins, fire-retardant mineral fillers, and proprietary coloring agents. Through-the-body color.
- C. Conformance Standards:
 - 1. UL 2818:
 - a. GREENGUARD - Emission levels in UL 2818, Section 7.1 are applicable for furniture products.
 - b. GREENGUARD Gold - Emission levels in UL 2818, Section 7.2 are applicable for building materials, finishes, and furnishings.
 - 2. Lavatories (Vanities): ANSI Z 124.3.
 - 3. Sinks: ANSI Z 124.6.
- D. Product Selections: As follows; specified dimensions as inside bowl dimensions:

EDITING NOTE: Select required sink and lavatory products.

- 1. Double Offset Sink, Product No. BD3016: 30 inches long by 16-1/2 inches wide by 8-1/4 inches deep.
- 2. Double Equal Sink, Product No. BD1630: 30 inches long by 16-1/2 inches wide by 8-1/4 inches deep.

3. Bar Utility Sink, Product No. BK1515: 15-5/8 inches long by 15-5/8 inches wide by 8-3/8 inches deep.
4. Single Bowl Sink, Product No. BK2015: 20-3/8 inches long by 15-5/8 inches wide by 8-1/2 inches deep.
5. Large Utility Sink: Product No. BK2717: 27-3/8 inches long by 17-3/16 inches wide by 14 inches deep.
6. Rectangle ADA Vanity, Product No. BV1514: 15-1/4 inches long by 13-7/8 inches wide by 5-1/4 inches deep.
7. Small Oval Vanity, Product No. BV1410: 14-1/4 inches long by 10-5/16 inches wide by 5 inches deep.
8. Oval Vanity, Product No. BV1612: 15-13/16 inches long by 11-13/16 inches wide by 5 inches deep.
9. Oval ADA Vanity, Product No. BV1512: 15-1/2 inches long by 12-5/8 inches wide by 3-1/2 inches deep.
10. Oval Vanity, Product No. BV1613: 16-5/16 inches long by 12-15/16 inches wide by 5-5/16 inches deep.
11. Circle Vanity, Product No. BV11C: 10-13/16 inches long by 10-13/16 inches wide by 6-7/16 inches deep.
12. Oval ADA Vanity, Product No. BV1014N: 14 inches long by 10 inches wide by 9 inches deep.
13. Circle ADA Vanity, Product No. BV1313: 12-3/4 inches long by 12-3/4 inches wide by 5 inches deep.
14. Rectangle ADA Vanity, Product No. BV1812: 18 inches long by 12-3/4 inches wide by 5 inches deep.
15. Oval ADA Vanity, Product No. BV1711: 17-3/4 inches wide by 10-13/16 inches long by 5 inches deep.
16. Special ADA Baby Bath, Product No. BV2213: 22-1/2 inches wide by 12-1/2 inches wide by 6-1/8 inches deep.
17. Rectangle Single ADA Sink, Product No. BK2716-US: 27 inches wide by 16 inches long by 5-1/2 inches deep.
18. Double Equal ADA Sink, Product No. BD2916-UD: 29 1/2 inches wide by 16 inches long by 5-1/2 inches deep.

EDITING NOTE: Select color from one of the following options.

19. Color: **[Bright White] [Linen White] [Cream]**.
20. Color: Specified in SCHEDULE Article of this Section.
21. Color: Indicated on Drawings.
22. Color: Selected from manufacturer's standard offerings.

2.4 ACCESSORY MATERIALS

- A. Joint Adhesive: Methacrylate-based adhesive for chemically bonding solid surfacing seams. Color complementary to solid surfacing sheet material. UL 2818 GREENGUARD Gold certified and complies with SCAQMD Rule 1168.
 1. Product: "Wilsonart Hard Surface Adhesive."
- B. Elastomeric Sealant: Mildew-resistant silicone sealant for filling gaps between countertops and terminating substrates in wet environment applications. Complies with ASTM C 920, Type S (single component), Grade NS (nonsag).
 1. Product: Acceptable to countertop manufacturer.

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2. Color: **[Complementary to solid surfacing color] [Clear] [Selected from sealant manufacturer's standard offerings]**.
- C. Siliconized Acrylic Sealant: Siliconized acrylic latex sealant. For general applications to fill gaps between countertops and at terminating substrates. Complies with ASTM C 834, Type OP, Grade NF, and SCAQMD Rule 1168.
1. Product: "Wilsonart Color Matched Caulk".
 2. Color: **[Complementary to solid surfacing color] [Clear] [Selected from sealant manufacturer's standard offerings]**.
- D. Construction Adhesive: Countertop manufacturer's recommended silicone-based construction adhesive for backsplashes, endsplashes, and other applications according to manufacturer's published fabrication instructions.

2.5 FABRICATION

- A. Fabricate components in shop, to greatest extent practicable, in sizes and shapes indicated according to approved shop drawings and Wilsonart published fabrication requirements.
- B. Form joint seams between solid surfacing components with specified seam adhesive. Completed joints inconspicuous in appearance and without voids. Provide joint reinforced if required by manufacturer for particular installation conditions.
- C. Provide holes and cutouts indicated on approved shop drawings. Rout cutouts and complete by sanding all edges smooth.

PART 3 - EXECUTION**3.1 EXAMINATION**

- A. Examine substrates and conditions that could adversely affect the work of this Section.
- B. Substrates must be sound, flat, smooth, and free from dust or other surface contaminants.
- C. Commencement of work will constitute acceptance of substrates and conditions to receive the work.

3.2 COUNTERTOP INSTALLATION

- A. Install solid surfacing components plumb, level, and true according to approved shop drawings and manufacturer's published installation instructions. Use woodworking and specialized fabrication tools acceptable to manufacturer.
- B. Form joint seams with specified seam adhesive. Seams to be inconspicuous in completed work. Seams in locations shown on approved shop drawings and acceptable to manufacturer. Promptly remove excess adhesive.
- C. Provide minimum 1/2 inch radius for countertop inside corners.
- D. Fill gaps between countertop and terminating substrates with specified silicone sealant.
- E. Rout sink cutouts to manufacturer's template. Adhere solid surface cast sink units to countertops with specified adhesive.
- F. Install backsplashes and endsplashes where indicated on Drawings. Adhere to countertops with specified construction adhesive.
- G. Vanities: Secure front panels to solid substrate with specified construction adhesive. Maintain 1/16 inch gap between fixed and removable panels.
 - 1. ADA Vanities: Angled front panel to permit wheelchair access to comply with referenced accessibility standard.

3.3 WINDOW SILL INSTALLATION

- A. Install window sills for full length of each window unit, securing to substrates with concealed fasteners and specified adhesive.
- B. Provide minimum 1/8 inch expansion gap on both sides of window sills. Fill gap with specified joint sealant.
- C. Completed work to be plumb, level, and true, with edges eased and sanded smooth.

3.4 REPAIRS

- A. If permissible to Architect, minor surface marring for solid surfacing components may be repaired according to manufacturer's published installation instructions.
- B. Remove and replace solid surfacing components that are damaged and cannot be satisfactorily repaired.

3.5 CLEANING AND PROTECTION

- A. Clean solid surfacing components according to manufacturer's published maintenance instructions. Completely remove excess adhesives and sealants from finished surfaces.
- B. Protect completed work from damage during remainder of construction period.

3.6 SCHEDULE

EDITING NOTE: Schedule for solid surfacing countertops may be inserted here if not indicated on Drawings or in Finish Schedule.

END OF SECTION 12 3661