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For more information, contact Durat; CaraGreen LLC, 1406 Transport Dr., Raleigh, NC 27603; Phone: (919) 929-3009; Website: www.caragreen.com/brands/detail/durat; Email: info@caragreen.com.

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SECTION 123661.16 - SOLID SURFACING COUNTERTOPS

TIPS:

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PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid surface material countertops.
2. Solid surface material backsplashes.
3. Solid surface material end splashes.
4. Solid surface material apron fronts.
5. Solid surface material sinks.

B. Related Requirements:

1. Section 224100 "Residential Plumbing Fixtures" for **[non-integral sinks] [sinks] [and] [plumbing fittings]**.

1.2 ACTION SUBMITTALS

A. Product Data: For countertop materials[**and sinks**].

B. Sustainable Design Submittals:

1. Chain-of-Custody Certificates: For certified wood products. Include statement of costs.
2. Product Data: For adhesives, indicating VOC content.
3. Health Product Declaration (HPD): For each product.
4. Laboratory Test Reports: For adhesives, indicating compliance with requirements for low-emitting materials.
5. Product Data: For composite wood products, indicating that product contains no urea formaldehyde.
6. Laboratory Test Reports: For composite wood products, indicating compliance with requirements for low-emitting materials.

7. Laboratory Test Reports: For composite wood products, indicating compliance with requirements for low-emitting materials.
 8. Product Data: For composite wood products, indicating compliance with requirements for formaldehyde emissions.
 9. Product Data: For composite wood products, indicating that product contains no urea formaldehyde.
- C. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.
1. Show locations and details of joints.
 2. Show direction of directional pattern, if any.
- D. Samples for Initial Selection: For each type of material exposed to view.
- E. Samples for Verification: For the following products:
1. Countertop material, 3 inches (75 mm) square.

1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For solid surface material countertops to include in maintenance manuals. Include Product Data for care products used or recommended by Installer and names, addresses, and telephone numbers of local sources for products.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate countertops similar to that required for this Project, and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Fabricator of countertops.

- C. Mockups: Build mockups to demonstrate aesthetic effects and to set quality standards for fabrication and execution.

- 1. Build mockup of typical countertop as indicated on Drawings.
- 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 FIELD CONDITIONS

- A. Field Measurements: Verify dimensions of countertops by field measurements[**after base cabinets are installed but**] before countertop fabrication is complete.

1.7 COORDINATION

- A. Coordinate locations of utilities that will penetrate countertops or backsplashes.

PART 2 - PRODUCTS

2.1 SOLID SURFACE COUNTERTOP MATERIALS

- A. Solid Surface Material: Homogeneous-filled plastic resin.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Durat; CaraGreen LLC; [**Durat Solids**] [**Palace Collection**] [**Standard Collection**] or comparable product by one of the following:
 - a. Corian Design, a brand of E. I. du Pont de Nemours and Company.
 - b. Durasein Solid Surface; a brand of Relang International, LLC.
 - c. <**Insert manufacturer's name**>.
 - 2. Integral Sink Bowls: Comply with CSA B45.5/IAPMO Z124.
 - 3. Colors and Patterns: [**As indicated by manufacturer's designations**] [**Match Architect's samples**] [**As selected by Architect from manufacturer's full range**].
- B. Composite Wood Products: Products shall be made without urea formaldehyde.

- C. Composite Wood Products: Products shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- D. Composite Wood Products: Products shall be made using ultra-low-emitting formaldehyde resins as defined in the California Air Resources Board's "Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products" or shall be made with no added formaldehyde.
- E. Composite Wood Products: Formaldehyde emission rates shall not be greater than the following when tested in accordance with ASTM D6007 or ASTM E1333:
 - 1. Hardwood Plywood: 0.05 ppm.
 - 2. MDF More Than **5/16 Inch (8 mm)** Thick: 0.11 ppm.
 - 3. MDF **5/16 Inch (8 mm)** or Less in Thickness: 0.13 ppm.
- F. Composite Wood Products: Products shall be made without urea formaldehyde.
- G. Plywood: Exterior softwood plywood complying with DOC PS 1, Grade C-C Plugged, touch sanded.

2.2 COUNTERTOP FABRICATION

- A. Fabricate countertops in accordance with solid surface material manufacturer's written instructions and to the AWI/AWMAC/WI's "Architectural Woodwork Standards."
 - 1. Grade: [**Premium**] [**Custom**] [**Economy**].
- B. Configuration:
 - 1. Front: [**Straight, slightly eased at top**] [**Beveled**] [**3/4-inch (19-mm) bullnose**] [**Radius edge with apron, 2 inches (50 mm) high with 3/8-inch (9.5-mm) radius**] [**1-1/2-inch (38-mm) laminated bullnose**] [**1-inch (25-mm) laminated bullnose**] [**Straight, slightly eased at top with separate apron, 6 inches (150 mm) high, recessed 1/4-inch (6.4-mm) behind front edge**].
 - 2. Backsplash: [**Straight, slightly eased at corner**] [**Beveled**] [**Radius edge with 3/8-inch (9.5-mm) radius**].
 - 3. End Splash: [**Matching backsplash**] [**None**].

- C. Countertops: Nominal **1/2-inch- (12-mm-)** thick, solid surface material adhered to **3/4-inch- (19-mm-)** thick subtop with front edge built up with same material to cover subtop.
- D. Backsplashes: Nominal **1/2-inch- (12-mm-)** thick, solid surface material.
- E. Fabricate tops with shop-applied edges[**and backsplashes**] unless otherwise indicated. Comply with solid surface material manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.
 - 1. Install integral sink bowls in countertops in the shop.
- F. Joints: Fabricate countertops without joints.
- G. Joints: Fabricate countertops in sections for joining in field[, **with joints at locations indicated**].
 - 1. Joint Locations: Not within **18 inches (450 mm)** of a sink or cooktop and not where a countertop section less than **36 inches (900 mm)** long would result, unless unavoidable.
 - 2. Splined Joints: Accurately cut kerfs in edges at joints for insertion of metal splines to maintain alignment of surfaces at joints[**where indicated**]. Make width of cuts slightly more than thickness of splines to provide snug fit.[**Provide at least three splines in each joint.**]
- H. Cutouts and Holes:
 - 1. Undercounter Plumbing Fixtures: Make cutouts for fixtures[**in shop**] using template or pattern furnished by fixture manufacturer. Form cutouts to smooth, even curves.
 - a. Provide vertical edges, slightly eased at juncture of cutout edges with top and bottom surfaces of countertop and projecting **3/16 inch (5 mm)** into fixture opening.
 - b. Provide vertical edges, rounded to **3/8-inch (10-mm)** radius at juncture of cutout edges with top surface of countertop, slightly eased at bottom, and projecting **3/16 inch (5 mm)** into fixture opening.
 - c. Provide **3/4-inch (20-mm)** full bullnose edges projecting **3/8 inch (10 mm)** into fixture opening.

2. Counter-Mounted Plumbing Fixtures: Prepare countertops in shop for field cutting openings for counter-mounted fixtures. Mark tops for cutouts and drill holes at corners of cutout locations. Make corner holes of largest radius practical.
3. Fittings: Drill countertops in shop for plumbing fittings, undercounter soap dispensers, and similar items.
4. Counter-Mounted Cooktops: Prepare countertops in shop for field cutting openings for cooktops. Mark tops for cutouts and drill holes at corners of cutout locations. Make corner holes of largest radius practical.

2.3 INSTALLATION MATERIALS

A. Adhesive: Product recommended by solid surface material manufacturer.

1. Adhesives shall have a VOC content of [70] <Insert value> g/L or less.
2. Adhesive shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
3. Adhesive shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
4. Adhesive shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." Formaldehyde emissions shall not exceed 9 mcg/cu. m or 7 ppb, whichever is less.
5. Adhesive shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
6. Adhesive shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." The building concentration of formaldehyde shall not exceed half of the

indoor recommended exposure limit, or 33 mcg/cu. m, and that of acetaldehyde shall not exceed 9 mcg/cu. m.

- B. Sealant for Countertops: Comply with applicable requirements in Section 079200 "Joint Sealants."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates to receive solid surface material countertops and conditions under which countertops will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of countertops.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install countertops level to a tolerance of **1/8 inch in 8 ft. (3 mm in 2.4 m)**, **1/4 inch (6 mm)** maximum. Do not exceed **1/64-inch (0.4-mm)** difference between planes of adjacent units.
- B. Fasten subtops to cabinets by screwing through subtops into cornerblocks of base cabinets. Shim as needed to align subtops in a level plane.
- C. Secure countertops to subtops with adhesive in accordance with solid surface material manufacturer's written instructions. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
- D. Bond joints with adhesive and draw tight as countertops are set. Mask areas of countertops adjacent to joints to prevent adhesive smears.
 - 1. Install metal splines in kerfs in countertop edges at joints[**where indicated**]. Fill kerfs with adhesive before inserting splines and remove excess immediately after adjoining units are drawn into position.
 - 2. Clamp units to temporary bracing, supports, or each other to ensure that countertops are properly aligned and joints are of specified width.

- E. Install backsplashes and end splashes by adhering to wall and countertops with adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears.
- F. Install aprons to backing and countertops with adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears. Fasten by screwing through backing. Predrill holes for screws as recommended by manufacturer.
- G. Complete cutouts not finished in shop. Mask areas of countertops adjacent to cutouts to prevent damage while cutting. Make cutouts to accurately fit items to be installed, and at right angles to finished surfaces unless beveling is required for clearance. Ease edges slightly to prevent snipping.
- H. Apply sealant to gaps at walls; comply with Section 079200 "Joint Sealants."

END OF SECTION 123661.16