

SECTION 12 36 21

RICHLITE PAPER COMPOSITE COUNTERTOPS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Countertops for architectural cabinetwork.
- B. Countertops for manufactured casework.
- C. Wall-hung counters and vanity tops.
- D. Backsplashes.
- E. Trim.

1.2 RELATED SECTIONS

- A. Section 06 41 00 - Custom Cabinets.
- B. Section 12 35 30 - Residential Casework.
- C. Section 22 40 00 - Plumbing Fixtures: Sinks.

1.3 REFERENCES

- A. ANSI A208.1 - American National Standard for Particleboard; 1999.
- B. ANSI A208.2 - American National Standard for Medium Density Fiberboard for Interior Use; 2002.
- C. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2004.
- D. AWI/AWMAC (QSI) - Quality Standard Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada; 2003.
- E. PS 1 - Construction and Industrial Plywood; 1995.
- F. WI (MAN) - Manual of Millwork; Woodwork Institute; 2003.

1.4 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Specimen warranty.
 - 4. MSDS for finish sealer.
- C. Shop Drawings: Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in other sections.

- D. Selection Samples: For each finish product specified, color chips representing manufacturer's full range of available colors.
- E. Selection Samples: For each finish product specified, product samples representing manufacturer's full range of available colors.
- F. Selection Samples: For each finish product specified, product samples of newly manufactured material representing manufacturer's full range of available colors.
- G. Verification Samples: For each finish product specified, minimum size 6 inches (150 mm) square, representing actual product, color, patterns, and edge profile.
- H. LEED Report:
 - 1. Submit documentation for rapidly renewable content (product made from plants having less than 10 years between planting and harvesting); indicate percentage of rapidly renewable content, unit cost of product, and quantity of product furnished on project.
 - 2. Submit documentation for paper products made without formaldehyde; certify that product is formaldehyde-free.
 - 3. Submit documentation of locally-sourced products (manufacture within 500 miles of project site); certify location of harvest and manufacture.
- I. Installation Instructions: Manufacturer's installation instructions and recommendations.
- J. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Authorized fabricator by material manufacturer.
- B. Installer Qualifications: Fabricator.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Paper Composite Countertops: Richlite Company: www.richlite.com.
- B. Substitutions: See Section 01 60 00 - Product Requirements.

- C. Substitutions: Not permitted.

2.2 COUNTERTOP ASSEMBLIES

- A. Countertop Assemblies: Surfaced with paper composite sheet.
1. Flat Sheet Thickness: 3/4 inch (19 mm), minimum.
 2. Flat Sheet Thickness: ____ inch (____ mm), minimum.
 3. Sinks and Bowls: Separate units for overcounter mounting.
 4. Sinks and Bowls: Separate units for undercounter mounting.
 5. Cutouts and Drain Grooves: As shown on drawings.
 6. Finish on Exposed Surfaces: Matte, with field-applied surface sealer.
 7. Color: As selected from manufacturer's standard selection.
 8. Color: _____.
 9. Exposed Edge Treatment: Same thickness as countertop.
 - a. Profile: Square edge.
 - b. Profile: Radiused edge.
 - c. Profile: As indicated on drawings.
 - d. Profile: _____.
 10. Back and End Splashes: Same sheet material as countertops.
 - a. Thickness: 1/2 inch (13 mm), minimum.
 - b. Top Profile: Square.
 - c. Top Profile: Radiused.
 - d. Top Profile: _____.
 - e. Height: ____ inch (____ mm), minimum.
 - f. Color: As indicated on drawings.
 11. Skirts: As indicated on drawings.
- B. Other Components: 1/2 inch (12 mm) thick, minimum.

2.3 MATERIALS

- A. Paper Composite Sheets: Cellulose or hemp-fiber paper heat pressed with phenolic resin; color consistent throughout thickness.
1. Surface Burning Characteristics: Flame spread 30, maximum; smoke developed 30, maximum; when tested in accordance with ASTM E 84.
 2. Density: 75.84 pounds per cu ft (1215 kg per cu m).
 3. Water Absorption: 0.36 percent for 1 inch (25 mm) thickness, unsealed material, 24 hour fully submerged test.
 4. Specific Gravity: 1.213.
 5. Thermal Properties:
 - a. Coefficient of Thermal Expansion, X Direction: 5.2 microinches per inch degree F (9.4 microns per mm degree C).
 - b. Coefficient of Thermal Expansion, Y Direction: 12.8 microinches per inch degree F (23.0 microns per mm degree C).
 - c. Coefficient of Thermal Expansion, Z Direction: 45.9 microinches per inch degree F (82.7 microns per mm degree C), for span of 73.5 inches (1.87 m).
 - d. Thermal Conductivity: 0.00051 Cal cm/sq cm sec degree C.
 6. Tensile Strength:
 - a. X Direction: 19,200 psi (132.4 MPa).
 - b. Y Direction: 13,100 psi (90.3 MPa).
 7. Compressive Strength:
 - a. X Direction: 18,400 psi (126.9 MPa); 7.09 percent strain at failure.
 - b. Y Direction: 15,900 psi (109.6 MPa); 7.15 percent strain at failure.
 - c. Z Direction: 30,000 psi (206.8 MPa); 20 percent strain at failure.
 8. Flexural Strength, Face in Tension:

- a. X Direction: 22,000 psi (151.7 MPa).
 - b. Y Direction: 17,300 psi (119.3 MPa).
- 9. Flexural Strength, Edge in Tension:
 - a. X Direction: 20,400 psi (140.6 MPa).
 - b. Y Direction: 16,100 psi (111.0 MPa).
- 10. Izod Impact, Face Impact:
 - a. X Direction: 2.48 ft lb per inch of width (0.046 J/m of width).
 - b. Y Direction: 1.46 ft lb per inch of width (0.027 J/m of width).
- 11. Izod Impact, Edge Impact:
 - a. X Direction: 0.68 ft lb per inch of width (0.013 J/m of width).
 - b. Y Direction: 0.62 ft lb per inch of width (0.012 J/m of width).
- B. Adhesives: Chemical resistant two-part epoxy waterproof adhesive as recommended by manufacturer.
- C. Joint Sealant:
 - 1. Sealant Type: Mildew-resistant silicone.
 - 2. Sealant Type: Silicone.
 - 3. Sealant Type: _____.
 - 4. Color: White.
 - 5. Color: Clear.
 - 6. Color: _____.

2.4 FABRICATION

- A. Fabricate in accordance with standards governing fabrication quality that are specified in the following sections: Section 06 40 00; Section 12 30 00; and _____.
- B. Fabricate in accordance with standards governing fabrication quality in accordance with WI's Manual of Millwork.
- C. Fabricate in accordance with standards governing fabrication quality in accordance with AWI's Quality Standard Illustrated.
- D. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
 - 1. Join lengths of tops using best method recommended by manufacturer.
 - 2. Fabricate to overhang fronts and ends of cabinets 1 inch (25 mm) except where top butts against cabinet or wall.
 - 3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
 - 4. Place seams to run full width of countertop, and at natural positions such as corners and midpoints as indicated on drawings.
 - 5. Cut and place sections with the grain of the material running crosswise to the width of the surface.
- E. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
 - 1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
 - 2. Height: 4 inches (102 mm), unless otherwise indicated.
 - 3. Height: 3-1/2 inches (90 mm), unless otherwise indicated.
 - 4. Height: _____ inches (____ mm), unless otherwise indicated.
- F. Wall-Mounted Counters: Provide skirts, aprons, brackets, and braces as indicated on drawings; finish to match countertop.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.
- B. Seal joint between back/end splashes and vertical surfaces.
 - 1. Where indicated use cove molding.
 - 2. Where applied cove molding is not indicated use specified sealant.

3.4 CLEANING AND PROTECTION

- A. Clean countertops surfaces thoroughly.
- B. Protect installed products until completion of project.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION