

PaperStone surfaces are slabs made from paper, resin and pigment. For most of the PaperStone products, the paper component is 100% recycled. PaperStone surfaces are fabricated much like solid surfaces and can be used for kitchen and bath surfaces, work surfaces, commercial surfaces, table tops, and more.

This Guide 3-Part Specification is ready to be edited according to your project requirements. To request samples, product literature, or additional assistance, email us at mike@paperstoneproducts.com or call at 360-742-2826, or visit our website www.paperstoneproducts.com

SECTION 12 36 71 – Paper-Composite Countertops

PART 1: GENERAL

1.1 Section includes:

- A. Countertops
- B. Bathroom vanities
- C. Tabletops
- D. Conference tables
- E. Transaction tops
- F. Reception areas
- G. Window sills
- H. Baseboards
- I. Other applications as shown on drawings

1.2 Related Sections

- A. Section 12 36 23.13 Plastic-Laminate-Clad Countertops
- B. Section 12 36 53 Laboratory Countertops
- C. Section 06 83 13 Resin Composite Paneling

1.3 References

- A. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- B. ASTM D527 – Tensile Strength, Tensile Modulus, Elongation
- C. ASTM D790 – Flexural Strength, Flexural Modulus
- D. ASTM D696 – Thermal Expansion
- E. NEMA LD3 Boiling Water Surface Resistance
- F. NEMA LD3 High Temperature Resistance
- G. NEMA LD3 Ball Drop (Impact)
- H. NEMA KD3 Gloss 60 Degree Gardner
- I. ASTM D785 – Hardness Test
- J. ASTM D256 – Izod Impact
- K. ANSI Z124 Abrasion Resistance
- L. ASTM D570 Water Absorption

- M. ANSI Z124 Colorfastness
- N. ASTM D695 Compressive Strength
- O. NSF/ANSI 51 Food Equipment Materials
- P. Forest Stewardship Council (FSC-US), Information regarding FSC in LEED projects
- Q. LEED (Leadership in Energy and Environmental Design green building rating system)

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 (<http://paperstoneproducts.com/information-landing.php>), including:
 - 1. Product description
 - 2. Fabrication/Installation instructions and recommendations
 - 3. Storage and handling requirements and recommendations
 - 4. Care and maintenance data
 - 5. Specimen warranty
 - 6. MSDS for finish sealer
- C. Shop Drawings:
 - 1. Indicate color, thickness, and finish
 - 2. Indicate field-verified dimensions
 - 3. Indicate locations and dimensions of cutouts
- D. Selection and verification samples: obtain product samples from manufacturer or distributor in 3.5"x3.5"x.25" or 12"x12"x.75" as needed.
- E. LEED Report:
 - 1. Credit MR 4: Clearly define the percentage of pre-consumer or post-consumer recycled content, percentage of recycled content, product cost per unit, and volume of product must be specified.
 - 2. Credit MR 7: Submittal must prove that qualifying wood based materials (certified by a recognized forest certification scheme) contribute value to the "50% base on cost" threshold related to the percent of Benchmark credit with which the certification scheme is compliant.
 - 3. IEQ Credit 4.4: Submit documentation for paper products made without urea formaldehyde; certify that this contains no added urea-formaldehyde resins.
 - 4. ID Credit 1: Innovation in Design. This credit can be awarded for exceptional performance above the standard LEED requirements set by the Green Building Rating System and/or innovative performance in green building categories.
- F. Installation Instructions: Manufacturer's installation instructions and recommendations/guidelines (<http://paperstoneproducts.com/information-landing.php>).
- G. Maintenance Instructions: Manufacturer's instructions and recommendations/guidelines for maintaining the surface (<http://paperstoneproducts.com/information-landing.php>).

1.5 Quality Assurance

Fabricator Qualifications: fabricator recommended by material manufacturer and/or distributor.

A. Installer Qualifications: Fabricator or installer experienced with PaperStone.

1.6 Delivery, Storage, and Handling

A. Remove banding and inspect material immediately upon receipt or at time of will-call.

B. Replace all packaging materials with the exception of the banding.

C. Store horizontally in a fully supportive manner (Do not store vertically on edge)

D. Do not over stack

E. Store between 50 and 80 degrees Fahrenheit

PART 2: PRODUCTS

Specifier: make selections where more than one choice is listed below

2.1 Manufacturers

A. Approved Manufacturer: Little Green, LLC dba Paneltech 2999 John Stevens Way, Hoquiam, WA 98550. Telephone: (360) 538-1480. Web: www.paperstoneproducts.com.

B. Substitutions

1. Request for substitutions will be considered in accordance with provisions of Section 01600 – Product Requirements or

2. Substitutions: Not permitted

2.2 Countertop Assemblies

A. Countertop Assemblies: Surfaced with paper composite panel.

1. Thickness

a. Flat Panel Thickness: 3/4" (19mm), minimum or

b. Flat Panel Thickness: _____" (_____mm), minimum.

2. Sinks and Bowls

a. Separate units for over-counter mounting or

b. Separate units for under-counter mounting.

3. Cutouts and Drain Grooves: As shown on drawings.

4. Finish on Exposed Surfaces

a. Matte with field-applied surface sealer.

b. Semi-gloss with field-applied surface sealer.

5. Color: _____.

6. Exposed Edge Treatment

a. Same thickness as countertop.

b. [Square edge][Radiused edge][Bullnose edge][Ogee edge] [_____]

7. Back and End Splashes:
 - a. Same panel material as countertops or _____.
 - b. Thickness same as countertops or _____ (1" maximum thickness).
 - c. Top Profile same as countertop or _____.
 - d. Height: _____" (_____mm).
 - e. Color: same as countertop or _____.
8. Built-up Edges and/or Aprons/Skirts:
 - a. Build up edge to : _____"
 - b. Preferred method is a "stacked built-up edge" as per manufacturer's fabrication guidelines.

2.3 Material

- A. Approved Products: PaperStone as manufactured by Little Green, LLC dba Paneltech.
- B. Composition: Recycled paper composite panel product that is produced with a proprietary resin which contains no petroleum based ingredients; color consistent throughout thickness.
- C. Size and Weight:
 1. Panel size: Standard sizes are 5'x8', 5'x10', 5'x12', 2.5'x8', 2.5'x10', 2.5'x12'
 2. Weight: Material weighs 1.8 lbs per square foot of each ¼" of thickness (¼" = 1.8lbs/sq.ft., ½" = 3.6lbs./sq.ft.).
 3. Thickness: Ranges from 1/8" to 1 ¼".
- D. Properties
 1. ASTM E84 Surface burning characteristics: Flame spread index 20, smoke developed index 110.
 2. ASTM D2583 Barcol hardness average 60-61
 3. ASTM D638 Tensile modulus psi 765,850 and elongation .3%
 4. ASTM D790 Flexural strength psi 14,200 and flexural modulus psi 680,350
 5. ASTM D696 Thermal expansion 1.92×10^{-4}
 6. ASTM D4060/ANSI Z124 abrasion resistance

No of Cycles	Weight Loss	Thickness Loss
500	.015g	.0015"
1000	.040g	.0010"
5000	.530g	.0035"
 7. NEMA LD3 Boiling water resistance rating – no effect – no change in color or surface finish
 8. NEMA LD3 High temperature resistance – heated to 365°F then held at 356°F for 20 minutes – slight effect – a change in color or surface finish only visible at certain angles or directions.
 9. ASTM D256 Izod impact – a 1.5" steel ball dropped from a height of 2'-6'. Fracture occurred at 5'5".
 10. ASTM D570 Water absorption – average absorption .251%

11. ASTM D2565 Colorfastness and aging – 200 hours in weatherometer caused no cracking, crazing, blistering or significant change in color or surface texture
 12. ASTM D695 Compressive strength average 27,576 PSI
- E. Adhesives
1. **Touchstone Express II Adhesive by Bonstone is a two-part epoxy especially formulated to bond PaperStone®**
- F. Joint Sealant
1. Sealant type: Mildew-resistant Silicone
 2. Sealant color: Clear or White
- G. Coating/Sealant – see 2.4F

2.4 Fabrication

- A. Inspect material for defects prior to fabrication.
- B. Ensure that the material is within manufacturer's flatness tolerance.
- C. Visually inspect material to ensure that an acceptable color match is achieved.
- D. Record panel number[s] of all material for warranty purposes.
1. Fabricate in accordance to manufacturer's recommendations/guidelines. Material can be fabricated 'dry' in a similar manner as a traditional wood product, or 'wet' in a similar manner as traditional stone. Manufacturer's Fabrication Guide clearly explains the unique differences.
 2. Layout: Fabricate tops and splashes in a manner that utilizes the largest panel sizes available, thus minimizing the number of necessary seams.
- E. Where seams are necessary, ensure they are performed as per manufacturer's recommendations. Improper seaming practices can result in structural and/or cosmetic failures.
- F. Seam placement and planning can be critical.
1. Most colors contain a level of "mottling" which offers a subtle grain direction running lengthwise within the panels.
 2. Seams should be at natural position such as corners and midpoints as indicated in drawings.
 - a. Cutouts: Prepare all cutouts accurately to size. All exposed edges should be finished/polished.
 - b. Built-up Edges/Aprons:
 - c. "Stacked" edges are preferred from both a structural and aesthetic standpoint.
 - d. "Mitered" edges require additional support and attention to ensure desired aesthetic appearance.
- G. Sealing/Finishing:
- a. Interior Horizontal applications – 2 coats of Osmo Top Oil, maintained with Original Bee's Wax.

- b. Interior Vertical applications – PaperStone Finish, maintained with PaperStone Cleaner/Rejuvenator.
- c. Exterior applications -- PaperStone Finish, maintained with PaperStone Cleaner/Rejuvenator.

PART 3: EXECUTION

3.1 Examination

- A. Ensure support structure and/or substrates are prepared properly.
- B. If substrate preparation is the responsibility of another installer, notify [Architect] [] of unsatisfactory preparation before proceeding.

3.2 Preparation

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using manufacturer's recommendations.
- C. Protect jobsite and surfaces against dust and water.

3.3 Installation

- A. Position materials to verify correct dimensions and layout.
- B. Make necessary adjustments.
- C. Securely attach countertops to cabinets/support structure using concealed fasteners. Ensure surfaces are level; use of shims may be necessary.
- D. Seal joints between backsplashes and/or side splashes with recommended sealant.
- E. Apply appropriate sealer/finish (see 2.4F)

3.4 Cleaning and Protection

- A. Clean countertop surfaces thoroughly.
- B. Ensure that countertops are sufficiently protected until completion of the project.
- C. Touch-up, repair, or replace damaged materials in a satisfactory manner.
- D. Apply maintenance product (see 2.4F) and polish.

End of Section