

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](mailto:mike@paperstoneproducts.com) or call at 360-742-2826, or visit our website [www.paperstoneproducts.com](http://www.paperstoneproducts.com)

**SECTION 12 36 71 – Paper-Composite Countertops**

**PART 1: GENERAL**

* 1. Section includes:

1. Countertops
2. Bathroom vanities
3. Tabletops
4. Conference tables
5. Transaction tops
6. Reception areas
7. Window sills
8. Baseboards
9. Other applications as shown on drawings

1.2 Related Sections

1. Section 12 36 23.13 Plastic-Laminate-Clad Countertops
2. Section 12 36 53 Laboratory Countertops
3. Section 06 83 13 Resin Composite Paneling
   1. References
4. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
5. ASTM D527 – Tensile Strength, Tensile Modulus, Elongation
6. ASTM D790 – Flexural Strength, Flexural Modulus
7. ASTM D696 – Thermal Expansion
8. NEMA LD3 Boiling Water Surface Resistance
9. NEMA LD3 High Temperature Resistance
10. NEMA LD3 Ball Drop (Impact)
11. NEMA KD3 Gloss 60 Degree Gardner
12. ASTM D785 – Hardness Test
13. ASTM D256 – Izod Impact
14. ANSI Z124 Abrasion Resistance
15. ASTM D570 Water Absorption
16. ANSI Z124 Colorfastness
17. ASTM D695 Compressive Strength
18. NSF/ANSI 51 Food Equipment Materials
19. Forest Stewardship Councel (FSC-US), Information regarding FSC in LEED projects
20. LEED (Leadership in Energy and Environmental Design green building rating system
    1. Submittals
21. See Section 01 30 00 – Administrative Requirements, for submittal procedures.
22. Product Data: Manufacturer’s data sheets on each product to be used (http://paperstoneproducts.com/information-landing.php), including:
23. Product description
24. Fabrication/Installation instructions and recommendations
25. Storage and handling requirements and recommendations
26. Care and maintenance data
27. Specimen warranty
28. MSDS for finish sealer
29. Shop Drawings:
30. Indicate color, thickness, and finish
31. Indicate field-verified dimensions
32. Indicate locations and dimensions of cutouts
33. 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.
34. LEED Report:
35. 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.
36. 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.
37. IEQ Credit 4.4: Submit documentation for paper products made without urea formaldehyde; certify that this contains no added urea-formaldehyde resins.
38. 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.
39. Installation Instructions: Manufacturer’s installation instructions and recommendations/guidelines (http://paperstoneproducts.com/information-landing.php).
40. Maintenance Instructions: Manufacturer’s instructions and recommendations/guidelines for maintaining the surface (http://paperstoneproducts.com/information-landing.php).
    1. Quality Assurance

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

1. Installer Qualifications: Fabricator or installer experienced with PaperStone.
   1. Delivery, Storage, and Handling
2. Remove banding and inspect material immediately upon receipt or at time of will-call.
3. Replace all packaging materials with the exception of the banding.
4. Store horizontally in a fully supportive manner (Do not store vertically on edge)
5. Do not over stack
6. Store between 50 and 80 degrees Fahrenheit

**PART 2: PRODUCTS**

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

2.1 Manufacturers

1. Approved Manufacturer: Little Green, LLC dba Paneltech 2999 John Stevens Way, Hoquiam, WA 98550. Telephone: (360) 538-1480. Web: [www.paperstoneproducts.com](http://www.paperstoneproducts.com).
2. 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
     1. Flat Panel Thickness: 3/4" (19mm), minimum or
     2. Flat Panel Thickness: \_\_\_\_\_” (\_\_\_\_\_mm), minimum.
  2. Sinks and Bowls
     1. Separate units for over-counter mounting or
     2. Separate units for under-counter mounting.
  3. Cutouts and Drain Grooves: As shown on drawings.
  4. Finish on Exposed Surfaces
     1. Matte with field-applied surface sealer.
     2. Semi-gloss with field-applied surface sealer.
  5. Color: \_\_\_\_\_\_\_\_\_\_\_.
  6. Exposed Edge Treatment
     1. Same thickness as countertop.
     2. [Square edge][Radiused edge][Bullnose edge][Ogee edge] [\_\_\_\_\_\_\_\_\_\_\_\_]



* 1. Back and End Splashes:
  2. Same panel material as countertops or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  3. Thickness same as countertops or \_\_\_\_\_\_\_\_\_\_ (1” maximum thickness).
  4. Top Profile same as countertop or \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  5. Height: \_\_\_\_\_\_\_\_\_\_” (\_\_\_\_\_\_\_\_mm).
  6. Color: same as countertop or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  7. Built-up Edges and/or Aprons/Skirts:
     1. Build up edge to : \_\_\_\_\_\_\_\_\_\_”
     2. 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 1.92x10-4
  6. ASTM D4060/ANSI Z124 abrasion resistance

|  |  |  |
| --- | --- | --- |
| No of Cycles | Weight Loss | Thickness Loss |
| 500 | .015g | .0015” |
| 1000 | .040g | .0010” |
| 5000 | .530g | .0035” |

* 1. NEMA LD3 Boiling water resistance rating – no effect – no change in color or surface finish
  2. 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.
  3. ASTM D256 Izod impact – a 1.5” steel ball dropped from a height of 2’-6’. Fracture occurred at 5’5”.
  4. ASTM D570 Water absorption – average absorption .251%
  5. ASTM D2565 Colorfastness and aging – 200 hours in weatherometer caused no cracking, crazing, blistering or significant change in color or surface texture
  6. 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

1. Inspect material for defects prior to fabrication.
2. Ensure that the material is within manufacturer’s flatness tolerance.
3. Visually inspect material to ensure that an acceptable color match is achieved.
4. 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.
5. Where seams are necessary, ensure they are performed as per manufacturer’s recommendations. Improper seaming practices can result in structural and/or cosmetic failures.
6. 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.
      1. Cutouts: Prepare all cutouts accurately to size. All exposed edges should be finished/polished.
      2. Built-up Edges/Aprons:
      3. “Stacked” edges are preferred from both a structural and aesthetic standpoint.
      4. “Mitered” edges require additional support and attention to ensure desired aesthetic appearance.
7. Sealing/Finishing:
   * 1. Interior Horizontal applications – 2 coats of Osmo Top Oil, maintained with Original Bee’s Wax.
     2. Interior Vertical applications – PaperStone Finish, maintained with PaperStone Cleaner/Rejuvenator.
     3. 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

1. Clean surfaces thoroughly prior to installation.
2. Prepare surfaces using manufacturer’s recommendations.
3. Protect jobsite and surfaces against dust and water.

3.3 Installation

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

3.4 Cleaning and Protection

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

**End of Section**