SECTION 12 3663
ULTRACOMPACT SURFACING - COUNTERTOPS

PART 1. GENERAL

1.1 SUMMARY

A. Section Includes:
1. Ultracompact countertops.
2. Setting materials and accessories.

B. Related Sections:
1. Division 01: Administrative, procedural, and temporary work requirements.
2. Section [_____] - Steel supports.
3. Section [_____] - Wood supports.
4. Section [_____] - Cementitious backer unit substrate.
5. Section [_____] - Base cabinets.
6. Section [_____] - Joint sealers.
7. Section [_____] - Toilet accessories.

1.2 REFERENCES

A. American National Standards Institute (ANSI):
1. A108.5 - Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex Portland Cement Mortar.
2. A118.4 - Latex-Portland Cement Mortar.

B. ASTM International (ASTM):

C. Greenbuild Environmental Institute (GFI) - Certification Programs.

1.3 SUBMITTALS

A. Submittals for Review:
1. Shop Drawings: Include layout, dimensions, materials, finishes, cutouts, and attachments.

B. Samples:
1. [3 x 3] [_____] inch ultracompact sheet samples [in specified color] [showing available colors].
2. [3] [_____] inch long joint sealer samples [in specified color] [showing available colors].

C. Sustainable Design Submittals:

1. Recycled Content: Certify percentages of post-consumer and pre-consumer recycled content.

D. Closeout Submittals:
   1. Maintenance Data: Include recommended cleaning materials and procedures, and list of materials detrimental to ultracompact sheet.
1.4 QUALITY ASSURANCE


B. Fabricator and Installer Qualifications: Minimum [2] [_____] years [documented] experience in work of this Section

C. Mockup:
   1. Construct [countertop mockup, [6] [_____] feet wide, full depth, with splash [and skirt].] [[_____] mockup, [_____] x [_____] feet.]
   2. Include [plumbing fixtures and trim.] [______]
   3. Locate [where directed.] [______]
   4. Approved mockup may remain as part of the Work.

1.5 WARRANTY

A. Provide manufacturer’s 10 year warranty against defects in materials and workmanship.

PART 2. PRODUCTS

2.1 MANUFACTURERS

A. Contract Documents are based on products by Cosentino USA, Inc. (www.dekton.com)

B. Substitutions: [Under provisions of Division 01.] [Not permitted.]

2.2 MATERIALS

A. Ultracompact Surfacing Sheet:
   1. Product: Dekton by Cosentino.
   2. Composition: Selected raw materials formed into flat slabs utilizing sinterized particle technology.
   4. Color: [_____] [To be selected from manufacturer’s full color range.]
   5. Surface finish: [Polished.] [Smooth matte.] [Textured matte.]
   6. Thickness: [_____] mm.
   7. Physical characteristics:
      a. Moisture expansion: 0.02 percent average, tested to ASTM C370.
      c. Flexural strength: 10,828 psi average, tested to ASTM C674.
      d. Water absorption: 0.03 percent average, tested to ASTM C373/C373M.
      e. Static coefficient of friction (slip resistance): 0.80 dry and 0.66 wet, tested to ASTM C1028.
      f. Wet dynamic coefficient of friction (DCOF): 0.57 average, tested to ANSI A137.1.
      g. Resistance to wear: 182.2 average wear index, tested to ASTM C501.
      h. Thermal shock resistance: No defects, tested to ASTM C484.
      i. Bond strength: 423 psi average, tested to ASTM C482.
      j. Specific absorption and gravity, tested to ASTM C97/C97M:
         1) Average percent of absorption per weight: 0.02 percent.
         2) Average density: 156 pounds per cubic foot.
      k. Breaking module, tested to ASTM C99/C99M:
         1) Average dry breaking strength: 8128 PSI.
         2) Average wet breaking strength: 7490 PSI.
      l. Flexural strength, tested to ASTM C380:
         1) Average dry flexural strength: 6940 PSI.
         2) Average wet flexural strength: 6205 PSI.
      m. Resistance to compression, tested to ASTM C170/C170M:
         1) Average dry compression: 34,409 PSI.
         2) Average wet compression: 17,823 PSI.
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n. Resistance to abrasion, tested to ASTM C1353/C1353M: 349 average abrasion index.
o. Resistance to chemical substances; tested to ASTM E650:
  1) Acetic acid, 3 percent: No affect.
  2) Acetic acid, 10 percent: No affect.
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3) Ammonium chloride, 100 g/L: No affect.
4) Citric acid solution, 30 g/L: No affect.
5) Citric acid solution 100 g/L: No affect.
6) Lactic acid, 5 percent: No affect.
7) Phosphoric acid, 3 percent: No affect.
8) Phosphoric acid, 10 percent: No affect.
9) Sulphuric acid, 30 g/L: No affect.
10) Sulphuric acid, 100 g/L: No affect.
11) Chemical pool products: No affect.
12) Sodium hydrochlorite solution, 20 mg/L: No affect.
13) Hydrochloric acid solution, 3 percent: No affect.
14) Hydrochloric acid solution, 18 percent: No affect.
15) Potassium hydroxide, 30 g/L: No affect.
16) Potassium hydroxide, 100 g/L: No affect.

8. Certifications:
   a. GEI Greenguard Certified.
   b. GEI Greenguard Gold Certified.

2.3 ACCESSORIES

A. Adhesive:
   1. Type recommended by ultracompact surfacing manufacturer.

**** OR ****

B. Latex-Portland Cement Mortar:
   1. Horizontal surfaces: Ultraflex LFT, Ultraflex LFT Rapid, Ultraflex 3, or Keraset mixed with undiluted Keraply by Mapei.

**** OR ****


D. Joint Sealer:
   1. Mapesil 100 Percent Silicone Sealant by Mapei.
   3. Color: [_____] [To be selected from manufacturer’s full color range.]

2.4 FABRICATION

A. Cut ultracompact surfacing panels accurately to required shapes and dimensions.

B. Fabricate exposed edges to [beveled] [ogee] [double ogee] [Dupont] [eased] [full bullnose] [half bullnose] [bevel bullnose] [triple pencil]
   [laminated bullnose] [laminated ogee bullnose] [laminated ogee] [laminated eased] [laminated bevel] [laminated Dupont] [laminated Dupont bullnose] [_____] profile.

C. Fabricate with hairline joints.

D. Cut holes for [sinks] [faucets] [toilet accessories] [_____].
PART 3. EXECUTION

3.1 PREPARATION

A. Clean surfaces to receive panels; remove loose and foreign matter than could interfere with adhesion.

3.2 INSTALLATION

A. Install countertops in accordance with manufacturer’s instructions and approved Shop Drawings.

B. Adhere countertops with continuous beads of adhesive.

**** OR ****

C. Set in thin set mortar bed in accordance with ANSI A 108.5.

D. Set plumb and level. Align adjacent pieces in same plane.

E. Install with hairline joints.

F. Fill joints between countertops and adjacent construction with joint sealer; finish smooth and flush.

3.3 INSTALLATION TOLERANCES

A. Maximum variation from level and plumb: 1/8 inch in 10 feet, noncumulative.

B. Maximum variation in plane between adjacent pieces at joint: Plus or minus 1/16 inch.

3.4 CLEANING

A. Clean countertops in accordance with manufacturer’s instructions.

3.5 PROTECTION

A. Protect installed countertops with nonstaining sheet coverings.

END OF SECTION