



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):

1. C97/C97M - Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.
2. C99/C99M - Standard Test Method for Modulus of Rupture of Dimension Stone.
3. C170/C170M - Standard Test Method for Compressive Strength of Dimension Stone.
4. C370 - Standard Test Method for Moisture Expansion of Fired Whiteware Products.
5. C373/C373M - Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products.
6. C482 - Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste.
7. C484 - Standard Test Method for Thermal Shock Resistance of Glazed Ceramic Tile.
8. C501 - Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser.
9. C648 - Standard Test Method for Breaking Strength of Ceramic Tile.
10. C650 - Standard Test Method for Resistance of Ceramic Tile to Chemical Substances.
11. C674 - Standard Test Method for Flexural Properties of Ceramic Whiteware Materials.
12. C880/C880M - Standard Test Method for Flexural Strength of Dimension Stone.
13. C1028 - Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.
14. C1353/C1353M - Standard Test Method for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic Using a Rotary Platform, Double-Head Abraser.

C. Greenguard Environmental Institute (GEI) - 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] [] x [] 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.



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2. Low-Emitting Materials: Certify volatile organic compound (VOC) content.

D. Closeout Submittals:

1. Maintenance Data: Include recommended cleaning materials and procedures, and list of materials detrimental to ultracompact sheet.

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Silestone Quartz
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1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum [10] [] years [documented] experience in manufacture of quartz surfacing materials.
- 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.
 - 3. Collection: [Solid.] [Natural.] [Tech.]
 - 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.
 - b. Breaking strength: 3963 lbf average, tested to ASTM C648.
 - 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 C880:
 - 1) Average dry flexural strength: 6840 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 C650:

- 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 n: 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.
- 2. Maximum volatile organic compound (VOC) content: [70] [] grams per liter.

**** OR ****

B. Latex-Portland Cement Mortar:

- 1. Horizontal surfaces: Ultraflex LFT, Ultraflex LFT Rapid, Ultraflex 3, or Kerset mixed with undiluted Keraply by Mapei.
- 2. Vertical surfaces: Granirapid System, Kerabond Keralastic T/Keralastic, or Kerabond Keralastic System by Mapei.

**** OR ****

C. Latex-Portland Cement Mortar: ANSI A118.4.

D. Joint Sealer:

- 1. Mapesil 100 Percent Silicone Sealant by Mapei.
- 2. Volatile organic compound (VOC) content: Maximum [50] [] grams per liter.
- 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] [].



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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