



## SECTION 09 6348

### ULTRACOMPACT FLOORING - THICK SET

#### PART 1. GENERAL

##### 1.1 SUMMARY

###### A. Section Includes:

1. Ultracompact floor finishes.
2. Setting materials and accessories.

###### B. Related Sections:

1. Division 01: Administrative, procedural, and temporary work requirements.
2. Section [ ] - Concrete substrate.
3. Section [ ] - Wood substrate.

##### 1.2 REFERENCES

###### A. American National Standards Institute (ANSI):

1. A108.1B - Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex Portland Cement Mortar.
2. A108.10 - Installation of Grout in Tilework.
3. A118.4 - Latex-Portland Cement Mortar.
4. A118.6 - Ceramic Tile Grouts.

###### B. ASTM International (ASTM):

1. or Modulus of Rupture of Dimension Stone.
2. C170/C170M - Standard Test Method for Compressive Strength of Dimension Stone.
3. C370 - Standard Test Method for Moisture Expansion of Fired Whiteware Products.
4. C373/C373M - Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products.
5. C482 - Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste.
6. C484 - Standard Test Method for Thermal Shock Resistance of Glazed Ceramic Tile.
7. C501 - Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser.
8. C648 - Standard Test Method for Breaking Strength of Ceramic Tile.
9. C650 - Standard Test Method for Resistance of Ceramic Tile to Chemical Substances.
10. C674 - Standard Test Method for Flexural Properties of Ceramic Whiteware Materials.
11. C880/C880M - Standard Test Method for Flexural Strength of Dimension Stone.
12. 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.
13. 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. Samples:

- a. [3 x 3] [ ] x [ ] inch ultracompact sheet samples [in specified color.] [showing available colors.]
- b. [3/8 x 3/8 x 3] [ ] x [ ] x [ ] inch grout samples [in specified color.] [showing available colors.]
- c. [3] [ ] inch long joint sealer samples [in specified color.] [showing available colors.]

###### B. Sustainable Design Submittals:

1. Recycled Content: Certify percentages of post-consumer and pre-consumer recycled content.
2. Low-Emitting Materials: Certify volatile organic compound (VOC) content.

###### C. Closeout Submittals:

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



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#### 1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum [10] [ ] years [documented] experience in manufacture of solid surfacing materials.

B. Mockup:

1. Construct wall finish mockup, [6] [ ] feet wide x [6] [ ] feet high.
2. Locate [where directed.] [ ].
3. 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](http://www.dekton.com))

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

#### 2.2 MATERIALS - ULTRACOMPACT SHEET

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.
  - n. Resistance to abrasion, tested to ASTM C1353/C1353M: 349 average abrasion index.
  - o. Resistance to chemical substances; tested to ASTM C650:



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- 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 MATERIALS - MORTAR

##### A. Portland Cement Mortar:

1. Cement: ASTM C150, Type 1, white color.
2. Sand: ASTM C144.
3. Lime: ASTM C207, Type S, hydrated.

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

\*\*\*\* OR \*\*\*\*

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

#### 2.4 MATERIALS - GROUT

##### A. Grout:

1. Keracolor [S] [U] [Sanded] [Unsanded] Grout by Mapei.
2. Color: [\_\_\_\_\_] [To be selected from manufacturer's full color range.]

\*\*\*\* OR \*\*\*\*

##### B. Grout:

1. ANSI A118.6, [sanded.] [unsanded.]
2. Volatile organic compound (VOC) content: Maximum [50] [ ] grams per liter.
3. Color: [\_\_\_\_\_] [To be selected from manufacturer's full color range.]

#### 2.5 ACCESSORIES

##### A. Joint Sealer:

1. Mapesil 100 Percent Silicone Sealant by Mapei.
2. Color: [\_\_\_\_\_] [To be selected from manufacturer's full color range.]

#### 2.6 FABRICATION

- A. Cut panels accurately to required shapes and dimensions.



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B. Fabricate with  $3/8$  [ ] inch joints.

C. Cut flooring to fit at perimeter and around penetrations with maximum  $1/4$  [ ] inch gaps.

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#### PART 3. EXECUTION

##### 3.1 PREPARATION

- A. Clean surfaces to receive flooring; remove loose and foreign matter than could interfere with adhesion.
- B. Remove ridges and projections. Fill voids and depressions with patching compound compatible with setting materials.
- C. Allowable Substrate Tolerances: Maximum 1/4 inch in 10 feet variation in substrate surface.

##### 3.2 INSTALLATION

- A. Install flooring in accordance with manufacturer's instructions.
- B. Set flooring in thick set mortar bed in accordance with ANSI A108.1.
- C. Lay flooring to pattern furnished by Architect. Do not interrupt pattern through openings.
- D. Install with [3/8] [ ] inch joints.
- E. Allow mortar to set for a minimum of 24 hours.
- F. Grout joints in accordance with ANSI A108.10; finish smooth and flush.
- G. Provide control joints at changes in plane, changes in substrate material, at joints between flooring and adjacent construction, over joints in substrate, and at maximum [ ] feet on center. Fill with joint sealer; finish flush and smooth.

##### 3.3 INSTALLATION TOLERANCES

- A. Maximum variation from level and plumb: 1/4 inch in 10 feet, noncumulative.
- B. Maximum variation in plane between adjacent pieces at joint: Plus or minus 1/16 inch.
- C. Maximum variation in joint width: Plus or minus 1/16 inch.

##### 3.4 CLEANING

- A. Clean panels in accordance with manufacturer's instructions.

END OF SECTION