

SECTION 093041

DECK TILES

This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by one of the following methods:

Microsoft Word 2013 and 2016: Display the FILE tab on the ribbon, click OPTIONS, then DISPLAY. Select or deselect HIDDEN TEXT.

Microsoft Word 2010: Display the FILE tab on the ribbon, click OPTIONS, then on left menu click on DISPLAY. Under ALWAYS SHOW THESE select or deselect HIDDEN TEXT.

This master specification section has been prepared by SigmaDek Ltd. for use in the preparation of a project specification section covering a porcelain tile exterior deck system.

The following should be noted in using this specification:

Hypertext links to specific websites are included after manufacturer names and names of organizations whose standards are referenced within the text, to assist in product selection and further research. Hypertext links are contained in parenthesis and shown in blue, e.g.:

<http://www.spexplus.net>(www.astm.com)

Optional text requiring a selection by the user is enclosed within brackets, e.g.: "Section [090000.] [____.]"

Items requiring user input are enclosed within brackets, e.g.: "Section [____ - ____]."

Optional paragraphs are separated by an "OR" statement, e.g.:

**** OR ****

Sustainable requirements are included for projects requiring LEED certification, and are included as green text. For additional information on LEED, visit the U.S. Green Building Council website at www.usgbc.org.

For assistance on the use of the products in this section, contact SigmaDek by calling 877-239-4449 by email at info@sigmadek.com, or visit their website at www.sigmadek.com.

PART 1 GENERAL

1.1 SUMMARY

Edit the following paragraphs to include only those items specified in this section.

- A. Section Includes:
 - 1. Porcelain exterior deck tiles.
 - 2. Aluminum support system.
 - 3. Trim.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.

1.2 REFERENCES

- A. American National Standards Institute (ANSI) (www.ansi.org) A137.1 - Specifications for Ceramic Tile.
- B. ASTM International (ASTM) (www.astm.org):
 - 1. 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.
 - 2. E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- C. International Organization for Standardization (ISO) 10545 - Ceramic Tiles.

1.3 SYSTEM DESCRIPTION

- A. Minimum Design Loads:
 - 1. Deck system to withstand uniform design load of 488 PSF.
 - 2. Maximum deflection under loading: L/360 without permanent set.

1.4 SUBMITTALS

Limiting submittals to only those actually required helps to minimize liability arising from the review of submittals. Minimize submittals on smaller, less complex projects.

Include the following for submission of shop drawings, product data, and samples for the Architect's review. Edit to suit project requirements.

- A. Submittals for Review:
 - 1. Shop Drawings: Include dimensioned layout of [each] deck area showing locations of perimeter trim, support trays, and tile installation pattern.
 - 2. Product Data: Manufacturer's descriptive data on perimeter trim, support trays, and tiles.
 - 3. Samples: [6 x 6] [] x [] inch tile samples [showing available colors.] [in specified color.]

Include the following for submission of closeout submittals for the Owner's record purposes.

- B. Closeout Submittals:
 - 1. Maintenance Data: Include recommended cleaning materials and procedures and list of materials detrimental to tiles.

1.5 QUALITY ASSURANCE

The following paragraph specifies a minimum level of experience required of the parties performing the work of this section. Retain if required, and edit to suit project requirements.

- A. Installer Qualifications: Minimum [2] [] years [documented] experience in work of this Section.

Include the following for full size mockups for review of construction, coordination of work of several sections, testing, or observation of operation. Edit to suit project requirements.

- B. Mockup:
 - 1. Size: Minimum [4 x 4] [] x [] feet.
 - 2. Show: Perimeter trim, support trays, and tiles.
 - 3. Locate [where directed.] [].
 - 4. Approved mockup may [not] remain as part of the Work.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Store materials in manufacturer's original packaging with labels intact and visible.
- B. Protect materials from damage and discoloration.

1.7 PROJECT CONDITIONS

- A. Environmental Requirements: Do not install materials during freezing weather.

1.8 WARRANTIES

In the following paragraph select 10 years for commercial installations and 20 years for residential installations.

- A. Furnish manufacturer's [10] [20] year tile warranty providing coverage against defects in materials and workmanship.

1.9 MAINTENANCE

Include the following for extra materials for the Owner's use in performing maintenance after completion. Edit to suit project requirements.

- A. Extra Materials: Provide [] extra tiles in color installed on Project.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on products by SigmaDek Ltd. (www.sigmadek.com)

Edit the following to indicate whether or not substitutions will be permitted for the products in this section.

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

2.2 MATERIALS

- A. Deck Tiles:
1. Type: SigmaDek porcelain deck tiles.
 2. Size: 8 inches wide x 48 inches long x 10 mm thick.
 3. Meet ANSI A137.1 requirements.
 4. Wet dynamic coefficient of friction: Minimum 0.50, tested in accordance with ANSI A137.1.
 5. Static coefficient of friction: Average 0.77 dry and 0.60 wet, tested to ASTM C1028.
 6. Surface abrasion resistance: Pass ISO 10545-7.
 7. Deep abrasion resistance: Less than or equal to 175 cubic mm, tested to ISO 10545-6.
 8. Water absorption: Less than 0.5 percent, tested to ISO 10545-3.
 9. Craze resistance: Pass ISO 10545-11.
 10. Frost resistance: Frostproof, tested to ISO 10545-12.
 11. Fading: No fading, tested to ISO 10545-14.
 12. Fire hazard classification: Flame spread/smoke developed rating of 0/5, tested to ASTM E84.

Refer to current SigmaDek technical data for available collections and colors. Edit to suit project requirements.

13. Collection: [Fiordland.] [Kaimai.] [Awanui.]
14. Color: [____.]

- B. Support Trays:
1. Material: Extruded aluminum, deck system manufacturer's standard.
 2. Finish: [Mill.] [Dark anodized.]

- C. Trim:
1. Material: Extruded aluminum, deck system manufacturer's standard.
 2. Finish: [White.] [Black.] [Clay.]

2.3 ACCESSORIES

Edit the following to suit project requirements. Use stainless steel fasteners in coastal and high humidity areas.

- A. Fasteners: [ACQ treated steel,] [Series 300 stainless,] type recommended by deck system manufacturer.
- B. Adhesive: Gun grade, type recommended by deck system manufacturer.

Include the following for watertight decks.

- C. Sealant: Silicone type, single component, non-sag.
- D. Detergent: Type recommended by deck system manufacturer.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install deck system in accordance with manufacturer's instructions [and approved Shop Drawings.]
- B. Place starter trim at outer edges of each deck area. Miter corners. Fasten to supporting construction within 2 inches of ends of units and at 24 inches on center maximum.

Include the following for watertight decks.

- C. Apply sealant continuously to tongue edges of support trays just before installing.
- D. Position first deck tray into starter trim and rotate into position.
- E. Leave 1/4 inch space between end of deck trays and perimeter trim at ends.
- F. Fasten deck tray to each support with fasteners located in screw channel.
- G. Repeat operation for subsequent deck trays.
- H. Cut off screw channel in last row before installing.
- I. Apply adhesive to deck trays using continuous "S pattern just prior to placing deck tiles, then spread out evenly using notched trowel.
- J. Place deck tiles into adhesive before it sets.
- K. Place tile separators at end joints between adjacent tiles; set flush with top of tiles.
- L. Cut deck tiles at last row, at ends, and around penetrations with clean edges.
- M. Cut finish trim to required lengths; set in full bead of adhesive.

3.2 CLEANING

- A. Clean finished deck surfaces in accordance with manufacturer's instructions.
- B. Mix detergent with clean water in proportions recommended by detergent manufacturer.
- C. Pre-wet surfaces with clean water.
- D. Spread detergent solution on surface and allow to stand for several minutes.
- E. Scrub surfaces using single disc floor cleaner or stiff fiber brushes.
- F. Thoroughly rinse surfaces with clean water; remove all traces of detergent solution.

END OF SECTION