

DIVISION 03

CONCRETE

**SECTION 03 5113
CEMENTITIOUS ROOF DECK**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cementitious wood fiber plank roof deck.

1.02 RELATED REQUIREMENTS

- A. Section 01 2200 – Unit Prices
- B. Section 02 4100 – Demolition
- C. Section 07 5200 – Membrane Roofing – Modified Bituminous
- D. Section 09 9000 – Paintings and Coatings

1.03 REFERENCE STANDARDS

- A. ASTM International:
 - 1. ASTM C177 Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
 - 2. ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - 3. ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - 4. ASTM D1621 Standard Test Method for Compressive Properties Of Rigid Cellular Plastics.
 - 5. ASTM D2842 Standard Test Method for Water Absorption of Rigid Cellular Plastics.
 - 6. ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials.

1.04 SYSTEM DESCRIPTION

- A. Performance Requirements:
 - 1. Provide a roof deck system that has been manufactured, fabricated and installed to provide deflection of less than L/240.
 - 2. Comply with requirements of Factory Mutual Class I Roof Deck.

1.05 SUBMITTALS

- A. See Section 01 3323 – Submittals, for submittal procedures.
- B. Product Data: Submit manufacturer's product data and installation instructions.
- C. Samples: Submit selection and verification samples as follows:
 - 1. Set of 12 inch square samples for each wood fiber deck unit required, showing full range of exposed texture to be expected in completed work.
 - 2. Labeled set of all accessories required for a complete installation.
- D. Quality Assurance/Control Submittals: Submit the following:
 - 1. Test Reports: Upon request, submit certified test reports from recognized test laboratories.
 - 2. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.
- E. Closeout Submittals: Submit the following:
 - 1. Warranty documents specified herein.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

1.07 DELIVERY, STORAGE & HANDLING

- A. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
1. Provide labels indicating brand name, deck style, plank size and plank thickness.
- B. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
1. Prevent soiling, physical damage or wetting.
 2. Store cartons open at each end to stabilize moisture content and temperature.

1.08 WARRANTY

- A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.
1. Warranty Period (Thermal for Tectum III): 15 years beginning with date of substantial completion.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Manufacturer: Tectum Inc., 105 South Sixth Street, Newark, OH 43055; Telephone: (888) 977-9691, (740) 345-9691; Fax: (800) 832-8869; E-mail: info@tectum.com; website: www.tectum.com.

2.02 MATERIALS

1. Tectum I Roof Deck Panels:
 - a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Nominal Panel Thickness: New panels to match thickness of existing panels.

2.03 ACCESSORIES

- A. Provide accessories as follows:
1. Tectum Grout:
 - a. Material: Gypsum cement grout, ready for mixing with potable water.
 2. Tectum Screws:
 - a. Material: Steel.
 - b. Type: [14 gauge Dekfast screw with 2 inch (51 mm) diameter washer]
 3. Construction Adhesive:
 - a. Manufacturer: Miracle Construction Adhesive.
 - b. Type: Adhesive SFA-66.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Comply with the instructions and recommendations of the roof deck panel manufacturer.

3.02 EXAMINATION

A. Site Verification of Conditions:

1. Verify that site conditions are acceptable for installation of roof deck panel system.
2. Do not proceed with installation of roof deck panel system until unacceptable conditions are corrected.

3.03 INSTALLATION

A. Roof Deck Plank Installation:

1. Place planks on joists with square cut ends butted tightly together.
 - a. Stagger end joints.
 - b. Tectum panels must be supported by bent plates (steel or other support) at all transitions of the roof. This includes but is not limited to the ridge, valleys, perimeter and panel direction change. Panels must have a minimum of 1 inch bearing and should be glued and screwed at these transitions.
 - c. Panel ends must fall over structural supports and have a minimum of 1 inch bearing.
2. Secure planks to joists with screws and spacing recommended by plank manufacturer.
3. Do not allow foot traffic on planks until after screws are installed.
4. Apply adhesive and grout recommended by manufacturer to ensure diaphragm performance as designed.
5. There are to be no visible fasteners exposed on the underside of panels at any area without prior written permission from the architect.

3.04 POTENTIAL REMOVAL AND REPLACEMENT

- A. Contractor shall be responsible for the potential removal and replacement of existing damaged cementitious wood fiber roof panels to the sum of 600 square feet, this price is to be included in the base bid.
- B. Contractor shall provide a unit price in their bid for the additional or deductive cost to remove and replace additional existing roof panels. This price will be approved by owner/architect prior to commencement.

3.05 CLEANING

- A. Clean exposed surfaces of all deck surfaces.
- B. Remove and replace work that cannot be successfully repaired to permanently eliminate evidence of structural damage.

3.06 PROTECTION

- A. Protect installed work from damage due to weather related moisture.
- B. Protect installed work from damage due to subsequent construction activity on the site so that the work will be without damage and deterioration at the time of acceptance by the Owner.

END OF SECTION