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SECTION 098400

TECTUM® FINALE™ PB ACOUSTICAL Interior Ceiling & Wall Panels (CEMENTITIOUS WOOD FIBER PRODUCTS)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

1.2 SUMMARY

A. Section Includes

1. Cementitious wood fiber acoustical ceiling and wall panels and system

B. Related Sections

1. Section 09 20 00 – Plaster and Gypsum Board
2. Section 01 81 13 - Sustainable Design Requirements
3. Section 01 81 19 - Indoor Air Quality Requirements
4. Divisions 23 - HVAC Air Distribution
5. Division 26 - Electrical

C. Alternates

1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and compliance with the basis of design.

2. Submittals that do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); Panel design, size, composition, color, and finish; Suspension system component profiles and sizes; Compliance with the referenced standards.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
2. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials
3. ASTM E 2768-11(2018) Standard Test Method for Extended Duration Surface Burning Characteristics of Building Materials
4. ASTM E 580 Installation of Metal Suspension Systems in Areas Requiring Moderate Seismic Restraint

Tectum® Finale™ PB Ceiling & Wall Panels

Item 8255W2L04T10_ _ _

Item 8255W4L04T10_ _ _

Item 8255W2L08T10_ _ _

Item 8255W4L08T10_ _ _

Accessories

Item 8187L16 #6 X 1-5/8" Painted Head – Sharp Point screws

Item 8186L16 #6 X 1-5/8" Painted Head – Drill Point screws

Item 8189L22 2-1/4" Painted Head – CMU Screws

5. ASTM C 636 / C636M – 19 Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels
6. ASTM C 754 Installation of Steel Framing Members to Receive Screw-Attached Gypsum Board
7. ASTM E 1264 Classification for Acoustical Ceiling Products
8. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber

B. International Building Code

C. ASHRAE Standard 62.1-2004, "Ventilation for Acceptable Indoor Air Quality"

D. NFPA 70 National Electrical Code

E. ASCE 7 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures

F. International Code Council-Evaluation Services - AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components

G. International Code Council-Evaluation Services Report - Seismic Engineer Report

1. ESR 1308 - Armstrong Suspension Systems

H. International Association of Plumbing and Mechanical Officials - Seismic Engineer Report

1. 0244 - Armstrong Single Span Suspension System

I. California Department of Public Health CDPH Standard Method V. 1.2 2017

1.4 SYSTEM DESCRIPTION

1" Tectum® Finale™ PB acoustical ceiling and wall systems are manufactured from domestic cementitious wood fiber. Built-in furring pieces with factory-filled fiberglass plant-based binder infill panels provide maximum sound control and install faster.

1.5 SUBMITTALS

A. Product Data: Submit manufacturer's technical data for each type of Tectum® Finale™ PB ceiling or walls required.

B. Samples: Minimum 12-inch x 12-inch samples of specified Tectum® Finale™ PB interior panels.

C. Shop Drawings: Layout and details of Tectum® Finale PB interior panels show locations of items that are to be coordinated with the installation as required.

D. Country of Origin: Submittals must be accompanied by letter, label, or certification indicating the manufacturing country of origin. Comply with Made in USA requirements as applicable for the project.

E. Certifications: UL certifications that products face material only complies with specified requirements, including laboratory reports showing compliance with specified tests and standards. Acoustical performance, products must be tested to the A and D-20 methods.

1.6 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.

B. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate UL markings.

1. Surface Burning Characteristics: Tested per ASTM E 84 (face material and furring) and complying with ASTM E 1264 Classification.

C. Tectum® Finale™ PB panels, as with other architectural features located at the ceiling, may obstruct, or skew the planned fire sprinkler water distribution pattern through possibly delay or accelerate the activation of the sprinkler or fire detection systems by channeling heat from a fire either toward or away from the device. Designers and installers are advised to consult a fire protection engineer, NFPA 13, or their local codes for guidance where automatic fire detection and suppression systems

D. Coordination of Work: Coordinate acoustical ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.

C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

D. Provide labels indicating brand name, style, size, and thickness

1.8 PROJECT / SITE CONDITIONS

A. Environmental Requirements:

1. Do not install ceiling panels until building is closed in and HVAC system is operational.

2. Locate materials onsite at least 72 hours before beginning installation to allow materials to reach temperature and moisture content equilibrium.

B. Maintain the following conditions in areas where acoustical materials are to be installed 72 hours before, during, and after installation:

1. Relative Humidity: 25 – 85%

2. Uniform Temperature: 32 – 120 degrees F (0 – 49 degrees C)

1.9 WARRANTY

A. Tectum® Finale™ PB Ceiling and Wall Panels: Submit a written warranty executed by the manufacturer agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to the following:

1. Defects in materials or factory workmanship

B. Tectum® Finale™ PB Ceiling and Wall Panels Warranty: Thirty (30) years from date of substantial completion.

C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

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PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Tectum® Finale™ PB Ceiling and Wall Panels:

1. Tectum® by Armstrong World Industries, Inc.

B. Suspension System and Accessories:

1. Armstrong World Industries, Inc.

2.2 TECTUM® FINALE™ PB CEILING AND WALL PANELS

A. Acoustical Panels Type AP-1

1. Surface Texture: Coarse
2. Composition: Aspen wood fibers bonded with inorganic hydraulic cement
3. Finish: Surface appearance shall be consistent from panel to panel. Factory-applied latex paint with Sodium Silicate surface coating for abuse resistance. Natural (TNA) finish is unpainted.
4. Color: (Standard Selection: Natural (TNA) or White (TWH) (Custom: Sherwin Williams colors available as specials)
5. Size: (Standard: 23 ¾" x 48", 23 ¾" x 96", 47 ¾" x 48, 47 ¾" x 96") Custom Sizes (width 23 ¾" – 48"; length 12" – 144")
6. Thickness: (Standard: 1" facing material + 1" integral furring) (Custom 1-1/2" or 2" face material + 1" integral furring)
7. Edge Profile: (Standard: Bevel on long edges, square on short sides) (Custom combinations of Bevel and Square edges available)
8. UL Classified Noise Reduction Coefficient (NRC) ASTM C 423: (A Mounting – 0.80, D-20 Mounting – 0.85) Classified with UL label.
9. UL Classified Flame Spread: ASTM E 1264; Class A. Product must be able to meet this criteria after being painted six (6) times.
10. Light Reflectance (LR) ASTM E 1477: up to 0.75 (white panels only)
11. Dimensional Stability / Mold Resistance: HumiGuard Plus and no significant mold growth when tested by ASTM D 3273
12. Acceptable Product: Tectum® Finale PB (Standard Items 8255W2L04T10_ _ _ , 8255W4L04T10_ _ _ , 8255W2L08T10_ _ _ , and 8255W4L08T10_ _ _) as manufactured by Armstrong World Industries
13. Sustainable: EPD (Environmental Product Declaration) and HPD (Health Product Declaration)

2.3. METAL SUSPENSION SYSTEMS

A. TECTUM® FINALE™ PB Panel Accessories:

1. #8 x 3" Painted Head – Sharp Point Screw (Item 8187L30_ _ _); Qty/Ctn: 1000
2. #8 x 3" Painted Head – Drill Point Screw (Item 8188L30_ _ _); Qty/Ctn: 1000
3. 3-1/4" Painted Head – CMU Screw (Item 8189L32_ _ _); Qty/Ctn: 500

* When specifying or ordering, include the appropriate 3-digit color suffix TNA = Natural, TWH = White

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations.

3.2 PREPARATION

A. Measure each ceiling and/or wall area and establish layout of acoustical units. Coordinate panel layout with mechanical and electrical fixtures.

B. Coordination: Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.

1. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.

3.3 INSTALLATION

A. Install Tectum® Finale™ PB Ceiling and Wall panels in accordance with manufacturer's installation instructions. See armstrongceilings.com/tectum for more information.

B. For high humidity installations, use ¾" pressure treated wood furring strips to maintain an air gap between structure and back of the Tectum® Finale™ PB panels.

3.4 ADJUSTING AND CLEANING

A. Replace damaged and broken Tectum® Finale™ PB Panels.

B. Clean exposed surfaces of acoustical ceilings including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove any Tectum® Finale™ PB Ceiling/Wall Panels that cannot be successfully cleaned and/or repaired. Replace with attic stock or new product to eliminate evidence of damage.

C. Cleaning and Disinfecting Guidelines

1. Tectum® Finale™ PB Panels are part of the Armstrong World Industries CleanAssure™ Family of Products. The CleanAssure family of products includes panels, suspension systems, and trim that can be disinfected using CDC recommended and EPA-approved disinfectants. Due to the potential impact on the finish, please follow the specific guidance below:

- a. It is recommended that only clear cleaners be used, as dyed liquids can permanently discolor the finish of the ceiling tiles.
- b. Cleaning is only recommended for the finished face of the board.
- c. The panels should never be soaked in water or other liquids, as this can have an adverse effect on board integrity. Use the safety recommendations for gloves and eye protection that are given by the manufacturer of the cleaner and cleaning equipment.

2. Tectum® Finale™ PB panels have been tested using the "Fog" disinfectant method; using Diversey™ – Morning Mist™ Neutral Disinfectant Cleaner - Diluted 2oz per gallon

3. Disinfectant Method – FOG

- a. Use the equipment manufacturer's instructions regarding distance from the surface, protective gear, and ventilation.
 - b. If another cleaner has been used in the fogging equipment, be sure to thoroughly clean the equipment before use to avoid potential contamination of the board surface with a non-compatible or staining cleaner.
 - c. Remove any obvious dirt before evenly applying cleaner.
 - d. Wipe dry with a clean, white microfiber cloth. Alternatively, the board may be air dried.
4. Disclaimer: Cleaning conditions and aesthetics may be impacted by additional site conditions. These instructions pertain only to the maintenance of the aesthetics and integrity of Armstrong Ceiling Solutions products. Please consult the manufacturer's instructions and guidance regarding any cleaning product or disinfectant product for use and efficacy.

END OF SECTION