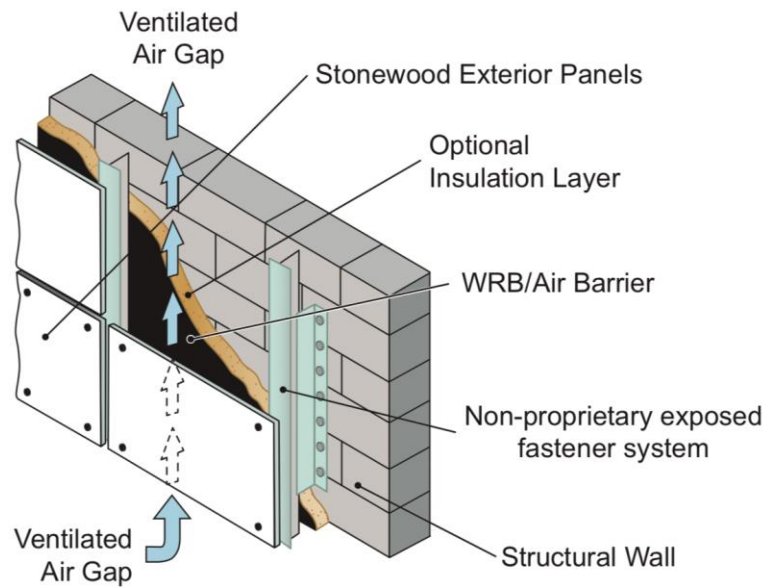


Phenolic Exterior Wall Cladding



SECTION 07 42 43 COMPOSITE WALL PANELS

This specification includes hidden text for editing for a project.

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Phenolic wall cladding panels.
 - 2. Attachments and fasteners.

1.2 RELATED SECTIONS

- A. Division 01: Administrative, procedural and temporary work requirements.
- B. [Section 06 10 00 - Rough Carpentry]
- C. [Section 06 15 00 - Wood Decking]
- D. [Section 06 20 00 - Finish Carpentry]
- E. [Section 07 05 43 - Cladding Support Systems]
- F. [Section 07 21 00 - Thermal Insulation and Accessories]
- G. [Section 00 00 00 - _____]

1.3 REFERENCES

- A. American Society for Testing and Materials (www.ASTM.org)
 - 1. D638 – Standard Test Method for Tensile Properties for Plastics
 - 2. D790 – Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
 - 3. D1761 – Standard Test Methods for Mechanical Fasteners in Wood
 - 4. E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 5. E2768 – Standard Test Method for Extended Duration Surface Burning Characteristics of Building Materials (30 min Tunnel Test)
- B. National Fire Protection Association (NFPA) (www.nfpa.org)
 - 1. 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components

1.4 ACTION SUBMITTALS

- A. Shop Drawings: Include plans, elevations, and details, size and layout panels, trim, accessories, supports and attachments.
- B. Product Data: Technical data, physical properties and installation instructions for each component.
- C. Color Charts: Manufacturers standard color options.
- D. Samples: Submit manufacturers finished samples [**3-inch x 3-inch showing available colors**] [**12-inch x 12-inch in specified color**]
- E. Warranty:
 - 1. Manufacturers warranty certificate.
 - 2. Installers written warranty statement.

1.5 INFORMATIONAL SUBMITTALS

- A. Installer: Installation experience statement.
- B. Testing and Evaluation Reports: Independent testing laboratory for the following for ASTM E84 and NFPA 285.
- C. [**Sustainable Design Submittals:**]
 - [1. **Certified Wood**]
 - [2. **Regional Materials**]

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. Minimum of [**10**] [**30**] years successful experience producing phenolic materials.
 - 2. [**Produce FSC certified materials**]
 - 3. Domestic factory assembly, shop fabrication and pre-finishing
- B. Installer Qualifications:
 - 1. Minimum 2-years documented installation experience of specified materials.
- C. Single Source Responsibility:
 - 1. Materials from a single manufacturer for each component and warranty.
- D. Pre-Installation Conference: Convene to review the following:
 - 1. Areas of installation.
 - 2. Framing and rough carpentry.
 - 3. Connections to adjacent surfaces and transitions.

4. Structural requirements and anchoring locations.

E. Mock-Up:

1. Full-size [8-foot x 8-foot] mock up erected at site, to verify color, workmanship and installation details.
2. Complete assembly, color, sheen and model.

1.7 FIELD CONDITIONS

A. Do not install panels on wet or frozen substrate.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle materials following manufacturer instructions.

B. Immediately upon delivery notify manufacturer of damaged or defective materials for replacement.

1. Verify manufactures labels meet approved product name, color, texture and finish.

C. Store factory sealed materials indoors, above grade and protected from sun, weather and materials that could cause staining or discoloration of finish.

1. Maintain humidity levels less than 65%RH prior to installation.

1.9 WARRANTY

A. Manufacturer to warrant material defects and manufacturing tolerances for a period of 10-years.

B. Installer to warrant installation defects for a period of [2] [4]-years. Repair or replace materials during warranty period at no cost to Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Fiberesin Industries, Inc. N48W37031 E. Wisconsin Avenue, Oconomowoc, WI Toll Free: (262) 567- 4427 www.stonewoodpanels.com; email: info@fiberesin.com

B. Substitutions: Not permitted. [Approved Equal]

2.2 MATERIALS

A. Phenolic Exterior Wall Cladding: Solid phenolic laminate panel with UV protective clear coat.

1. Style: [Add style] Color: [Add color]

3. Finish: Factory #60 matte

4. Panel Size: [48 inches x 96 inches] [custom sizing – Contact manufacturer]

5. Thickness: [5/16 inch (8mm)] [3/8 inch (10mm)] [1/2 inch (13mm)]

6. Panel Core: Phenolic resin treated layer, black and natural brown kraft paper

7. Decorative Layer: Melamine resin, proprietary pigmented and treated

8. Weather and UV Resistant Layer: 2-mil, proprietary layer combining pigment protection, Ultraviolet light and weather resistant layer

9. ASTM E84 Flame and Smoke Development: [Class A] [Class B]

B. Physical Properties

1. Flexural Strength, ASTM D-790pon

a. MD 16,000 psi

b. CD 12,000 psi

2. Flexural Modulus, ASTM D-790
 - a. MD 1.5×10^6 psi
 - b. CD 1.1×10^6 psi
3. Tensile Modulus, ASTM D638
 - a. MD 15,000 psi
 - b. CD 10,000 psi
4. Fastening Strength, ASTM D-1761:
 - a. **[730 pound-force]**
 - b. **[1,260 pound-force]**
 - c. **[1,700 pound-force]**
5. Extended surface Burn, ASTM E-2768
 - a. Max Flame Front =10 ft

2.3 FABRICATION

- A. Fabrication Tolerances: Manufacturer to provide shop fabrication and pre-finishing for a warranted finish.
 1. NEMA Testing Results
 - a. Dimensional Change, 3.11 test
 - 1) Length (Machine Direction): 0.25 percent
 - 2) Width (Cross Direction): 0.50 percent
 - b. Weight Per Unit Area:
 - 1) Pounds/ square feet: **[2.23] [2.68] [3.58]**
 - 2) Kilograms/ square meter: **[10.93] [13.12] [17.49]**
 3. Density: 86 pounds per cubic foot

2.4 ACCESSORIES

- A. Fasteners: Manufacturer approved austenitic stainless steel fastener with bi-metal welded carbon steel point.
 1. **[Concealed fasteners]**
 2. **[Exposed fasteners, [standard stainless steel] [paint color _____] finish]**
- B. Attachment System: Approved sub-frame system to support a cladding weight of up to 8 pounds per square foot, fabricated of 0.09-inches 6063 T5 extruded aluminum or 16-gauge G90 Galvanized steel.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine materials, installation instructions, and review manufacturers instructions on site.
- B. Verify panel style, color, and fasteners are approved by Architect.
- C. Verify substrates and adjacent surfaces are level and plumb for installation.
 1. Do not begin work until construction has progressed to allow installation of materials.
 2. Verify manufacturers fastener spacing requirements.
- D. Proceed with work when construction has progressed to allow a warranted installation.
 1. Installation deems acceptance of work for a warranted installation.

3.2 INSTALLATION

- A. Install in accordance with manufacturers written instructions and Shop Drawings, maintaining required 1-inch ventilation spacing requirement.

- B. Fasten panels to an approved attachment system structurally supported by aluminum, galvanized steel or wood stud supported wall.
- C. Install panel square, edges clean and true to size.
 1. Cut panels to fit at perimeter and around penetrations with minimum 3/8-inch gap.
 2. Re-chamfer field cut edges.
- C. Do not install damaged, irregular and defective panels.

3.3 FIELD QUALITY CONTROL

- A. Inspect panel ventilation at top and bottom of wall, and manufacturers fixed and floating holes instructions have been followed.
- B. Verify installation, fasteners and connections with adjacent materials, and transitions have been completed in accordance with shop drawings.

3.4 ADJUSTING

- A. Modify, adjust and replace panels not within manufacturers tolerances and as required by Architect.

3.5 PROTECTION

- A. Protect surface, corners and components from damage prior to Owner occupancy using temporary protection.

END OF SECTION

Illustration

