

SECTION 07420
PLASTIC ROOF & WALL PANELS
(SOLID PHENOLIC EXTERIOR WALL PANELS)

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Solid phenolic Single-skin panels with aluminum subframing system; and required air and moisture barrier (black color) for:
 - 1. Wall cladding system application. Attachment system to use horizontally-attached extrusions with shims. Solid phenolic exterior panels are hereby defined as Trespa Miteon[®] including the UNIVERSE[®] 7000 attachment system as provided by Universe Corporation (Certified Trespa Miteon[®] Fabricator), St. Louis, MO. (314) 439-2800; Fax (314) 439-2801 contact@universecorp.com
- B. Related Sections: Section(s) related to this section that are not included are:
 - 1. Metal Stud Framing System: Division 5.
 - 2. Rough Carpentry & Sheathing: Division 6 Rough Carpentry Section.
 - 3. Aluminum Subframing: Division 6 Metal Fabrications Section.
 - 4. Air & Moisture Barriers: Division 7
 - 5. Flashing & Sheet Metal: Division 7
 - 6. Storefront Framing: Division 8 Aluminum Entrance and Storefront System Section.
 - 7. Curtain Wall Framing: Division 8 Aluminum Curtain Wall Framing System.

1.02 REFERENCES

- A. ASTM International:
 - 1. ASTM D792 Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
 - 2. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. European National Standards (EN):
 - 1. EN 438-2 Decorative High-Pressure Laminates (HPL) Sheets Based on Thermosetting Resins. Determination of Properties.
- C. Deutsches Institut für Normung e. V. (German Standards Institute) (DIN).

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide panels that have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's SPEC-DATA[™] product sheet, for specified products.
- C. Shop Drawings: Submit shop drawings done in a CAD format utilizing IntelliClad[®] methodology showing layout, profiles and product components, including edge conditions, panel joints, fixture location, anchorage, accessories, finish colors, patterns and textures.
- D. Samples: Submit selection and verification samples for finishes, colors and textures.
- E. Quality Assurance Submittals: Submit the following:

1. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties.
 2. Certificates:
 - a. Qualification Certificates: Submit certificate indicating compliance with qualification requirements in Quality Assurance article.
 - b. Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
 3. Manufacturer's Instructions: Manufacturer's installation instructions.
 4. Manufacturer's Field Reports: Manufacturer's field reports specified herein.
- F. Closeout Submittals: Submit the following:
1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.
 2. Warranty: Warranty documents specified herein.

1.05 QUALITY ASSURANCE

- A. Qualifications:
1. Manufacturer (HPL) Qualifications: Manufacturer producing product in ISO 9001 certified facility, capable of providing field service representation (or certified representative) during fabrication and approving application method.
 - a. Obtain from a single manufacturer the sheet stock material.
 2. Fabricator/Installer Qualifications: Fabricator shall be a manufacturer approved and certified "Certified Meteor Fabricator (CTM)". Installer shall be approved by the CTM or the manufacturer and experienced in performing work of similar type and scope.
- B. Mock-Ups:
1. Mock-Up: A 2' x 2' square sample will be provided (not installed on project).
- C. Preinstallation Meetings: Conduct preinstallation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.

1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials protected from exposure to harmful weather conditions, at temperature and humidity conditions recommended by manufacturer.

1.07 PROJECT CONDITIONS

- A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.08 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

Specifier Note: Trespa offers a limited warranty for a 10 year period against color loss and loss of specified physical and mechanical properties of Trespa Meteor when the product is fabricated and installed in accordance with manufacturer's requirements. Contact Trespa for details of standard and project-specific warranties.

- B. 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.

PART 2 PRODUCTS

2.01 SOLID PHENOLIC WALL PANELS

- A. Manufacturer: Trespa North America.
1. Contact: Trespa North America, 12267 Crosthwaite Circle, Poway, CA 92064; Telephone: (800) 487-3772, (858) 679-2090; Fax: (858) 679-0440; E-mail: info@TrespaNorthAmerica.com; Web site: www.TrespaNorthAmerica.com.
- B. Proprietary Product(s):

07420- Polymer Based Wall Cladding (Horizontal Attachment method).

1. Trespa Meteon[®].
 - a. Material: Solid phenolic panel.
- C. Certified Fabricator and System:
 1. Certified Trespa Meteon[®] Fabricator (CTM): Universe Corporation, 3333 Foerster Road, St. Louis, MO 63044; Telephone: (314) 439-2800; Fax: (314) 439-2801; E-mail: contact@universecorp.com; Web site: www.universecorp.com.
 - a. System: Universe[®] 7000 horizontal attachment system, 1" nominal depth (from sheathing to backside of panel); system approved by Trespa NA. Horizontal system is comprised of hat-shaped extrusions at horizontal joints and zee-shaped extrusions at panel midpoints. Horizontal extrusions will have preformed splice to bridge between studs as necessary. Extrusions will be black color. (For projects over 40' elevation, the system is designated Universe[®] 7000-285, and uses an aluminum shim, and must have a VaproShield "WallShield" or Tyvek Commercial Wrap air/moisture barrier only to meet the NFPA-285 requirements.)
 - b. Vent will be provided at base of panels using zee-shaped extrusions or vent screen.
 - c. Vertical joints will be open. An (optional) black-colored aluminum joint closure affixed to the back side of the panel is available, but is not standard. (If 'optional' is not edited out, it is assumed to be excluded).
 - d. Horizontal joints will be open, but will have the Universe[®] 7000 hat extrusion (painted black) which is recessed.
 - e. Panel faces shall have shop-chamfered/eased edge front edge treatment with square cut. Square cut panels without front side edge treatment not acceptable
 - f. Flashings are not considered to be part of this specification section, unless specifically called described on the drawings as being provided by the solid phenolic composite panel installer.

Specifier Note: If air & moisture barrier is specified in another section, delete paragraph D "Air & Moisture Barrier".

D. Air & Moisture Barrier:

1. Air & moisture barrier to be furnished by solid phenolic wall panel installer. Color to be black. Air & moisture barrier must be self-healing fabric or liquid applied system, installed per manufacturer's instructions including premolded corners and accessories. Fabric product to be similar to VaproShield "WrapShield"; Liquid applied product to be similar to Henry AirBloc (liquid applied air/moisture barriers not acceptable on elevations over 40' due to NFPA-285 approval). (If not specifically described, fabric product assumed to basis of specification.) In the event that a non-self healing product is used (similar to Tyvek) the installer must use a black Ice & Water Shield patch at every fastener location penetration as well as provide a black color UV resistant barrier behind all joints.

Specifier Note: Trespa Meteon[®] is available in over 50 colors ranging from Light Neutrals and Mid Tones to Accent Colors and Dark Neutrals. Custom color matching is available for minimum quantity orders.

- a. Colors: Submit manufacturer's standard colors for selection by Architect. [Specify standard color(s) and order number(s)].
 - 1) Panels shall be Color one side [Color to be:]. If no color is specified, it assumed to be a "Plain/Uni-color".

Specifier Note: Trespa Meteon[®] is available in the standard finish of satin sheen panels and also in high quality Inspirations lines.

- b. Finish: [Satin sheen- base price unless edited] [Metallic directional] [Gloss] [Rock] [Naturals] [Wood Grains].
- c. Panel Core: Type FR fire retardant black core.
- d. Panel Standard Sizes: [11' 11" x 6' 1" (3650 x 1860 mm)] [10 feet x 5 feet (3050 x 1530 mm)] [8' 4" x 6' 1" (2550 x 1860 mm)].
- e. Panel Thickness: standard [5/16 inch (8 mm)]. Available [3/8 inch (10mm)] [1/2 inch (13 mm)].
- f. Modulus of Elasticity: 1,200,000 psi (8000 N/mm²) minimum per DIN 53457.
- g. Tensile Strength: 13,000 psi (90 N/mm²) per DIN 53455.
- h. Flexural Strength: 16,000 psi (110 N/mm²) minimum per DIN 53452.
- i. Surface Impact Resistance: 9 lbf (40 N) index minimum per EN 438-2 (11).
- j. Scratch Resistance: 0.79 lbf (3.5 N) index minimum per EN 438-2 (14).
- k. Fire Performance: Maximum flamespread index of 5 per ASTM E84 [(Type I, Class A)].
- l. Smoke Development Index: 5.
- m. Water Absorption: Less than 1.0% per EN 438-2 (7).
- n. Porosity: Nonporous surface and edges.
- o. Microbial Characteristics: Will not support microorganic growth.

- p. Cleanability: Resists dirt pickup. Easily cleaned.
- q. Color Stability: 4 - 5 grey scale per ISO 105 A02-87 (3000 hr xenon lamp test).

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

2.03 ACCESSORIES

- A. Secondary Framing: Aluminum Universe® 7000 hat and zee extrusion panel system panel system attachment. Any other subgirts, framing or furring is not part of the system.
- B. Installation Materials: Aluminum trim at perimeter (if detailed) is by sheet metal 07600];
- C. Standard exposed-fastener is a stainless steel finish "torx-head" fastener. Color-matched fasteners, which are premium-priced, must be specified, as required to suit project conditions.
- D. Decorative fasteners, GAZ elements or stainless steel sleeves are not included unless specifically specified.

2.04 FABRICATION

- A. Fabricate solid phenolic wall panels and accessory items in accordance with manufacturer's recommendations and approved submittals.
- B. Fabricate panels to profile indicated.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.03 PREPARATION

- A. Surface Preparation: [Specify applicable product preparation requirements.].

Coordinate Article below with manufacturer's recommended installation details and requirements.

3.04 INSTALLATION

- A. Install solid phenolic wall panels plumb and level and accurately spaced in accordance with manufacturer's recommendations and approved submittals.
- B. Fasten solid phenolic wall panels to supporting substrate with fasteners.
- C. Interface with Other Work: [Specify applicable requirements for interface with other work.].
- D. Accessory Items: Install corner profiles, gaskets and trim [Insert accessory items.] with fasteners and adhesive appropriate for use with adjoining construction as indicated on drawings and as recommended by manufacturer.

3.05 FIELD QUALITY REQUIREMENTS

Specifier Note: Edit paragraph below. Establish number and duration of periodic site visits with Owner and manufacturer and specify below. Consult with manufacturer for services required. Coordinate paragraph below with Division 1 Quality Assurance Section and Part 1 Quality Assurance Submittals herein. Delete if manufacturer's field service not required.

- A. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

1. Site Visits: [Specify number and duration of periodic site visits.].

3.06 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

3.07 PROTECTION

- A. Protection: Protect installed product and finish surfaces from damage during construction.

END OF SECTION