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This MANU-SPEC™ utilizes the Construction Specifications Institute (CSI) *Manual of Practice*, including *MasterFormat*™, *SectionFormat*™ and *PageFormat*™. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets [ ]; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies solid phenolic wall paneling marketed under the Trespa Virtuon® trade name, manufactured by Trespa North America. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles, including Section 06600 Plastic Fabrications; Section 10150 Compartments & Cubicles; Section 10260 Wall & Corner Guards; and Section 10500 Lockers.

**SECTION 09770**  
**SPECIAL WALL SURFACES**  
**(SOLID PHENOLIC WALL PANELING)**

**PART 1 GENERAL**

**1.01 SUMMARY**

Specifier Note: Trespa Virtuon is a solid phenolic flat panel based on thermosetting resins homogeneously reinforced with cellulose fiber and manufactured under high pressure and temperature. The panels have an integrated, decorative surface with pigmented resins. Trespa Virtuon applications include: wall cladding, partitions, lockers and cubicles in high moisture environments, including showers, locker rooms, pharmaceutical and food preparation facilities, healthcare facilities and laboratories. Trespa Virtuon is extremely moisture resistant. Panel surface has a closed structure, making Trespa Virtuon easy to clean; its chemical resistance allows the use of aggressive disinfectants and cleaners, including organic solvents. High flexural strength and elasticity make the panel material impact resistant. It is suitable for application in environments exposed to vandalism. Graffiti can be easily removed.

- A. Section Includes: Solid phenolic [Wall cladding] [Casework paneling] [Cubicle panels] [Toilet partition panels].

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

- B. Related Sections: Section(s) related to this section include:
1. Rough Carpentry: Division 6 Rough Carpentry Section.
  2. Finish Carpentry: Division 6 Finish Carpentry Section.
  3. Architectural Woodwork and Casework: Division 6 Architectural Casework Section.
  4. Metal Framing and Furring: Division 9 Metal Framing Section.
  5. Gypsum Board Substrate: Division 9 Gypsum Board Assemblies Section.

**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.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this Article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

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 showing layout, profiles and product components, including edge conditions, panel joints, 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.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article herein. Retain or delete as applicable.

- 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 Qualifications: Manufacturer producing product in ISO 9001 certified facility, capable of providing field service representation during fabrication and approving application method.
    - a. Obtain from a single manufacturer.

Specifier Note: Confirm availability of qualified fabricators meeting requirements specified below.

- 2. Fabricator/Installer Qualifications: Installer shall be approved by the manufacturer and be experienced in performing work of similar type and scope.

Specifier Note: Retain paragraph below for fabricated assemblies required for review of construction, coordination of work of several sections, testing or observation of operation. Mock-ups, when accepted or approved, establish standards by which work will be judged. Coordinate below with Division 1 Quality Control (Mock-Up Requirements) Section.

- B. Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, texture, pattern and workmanship standards. Comply with Division 1 Quality Control (Mock-Up Requirements) Section.

Specifier Note: Edit paragraph below to specify mock-up size.

- 1. Mock-Up Size: [Specify mock-up size].
- 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
- 3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.
- 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.

Specifier Note: Article below should include special and unique requirements.

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.

Specifier Note: Coordinate Article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section.

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 delamination of Trespa Virtuon 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**

Specifier Note: Retain Article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 SOLID PHENOLIC WALL PANELS

Specifier Note: Trespa Virtuon is a flat panel based on thermosetting resins, homogeneously reinforced with cellulose fibers and manufactured under high pressure. The panels have an integrated, pigmented resin, decorative surface that is electron-beam cured.

- A. Manufacturer: Trespa North America.

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

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](mailto:info@TrespaNorthAmerica.com); Web site: [www.TrespaNorthAmerica.com](http://www.TrespaNorthAmerica.com).

B. Proprietary Product(s):

1. Trespa Virtuon.
  - a. Material: Solid phenolic wall panel.

Specifier Note: Trespa Virtuon is available in over 50 colors, ranging from uni-color solids to metallics. Virtuon is available in 6 textures: satin, silk, ribbon, rhino, rock and bark. Custom colors are also available; consult manufacturer.

- b. Color and Pattern: [Submit manufacturer's standard colors for selection by Architect.] [Specify standard color(s) and order number(s).] [Match Architect's custom sample.].
  - 1) Panels shall be [Color 1 side] [Color 2 sides] [Color both sides, 1 side standard white].

Specifier Note: Select the applicable panel core below based upon the degree of fire resistance required for the application. Type FR panels are classified by Underwriters Laboratories, Inc., as Class A materials when tested per ASTM E84.

- c. Panel Core: [Standard black core] [Type FR fire retardant black core].

Specifier Note: Specify panel size providing joint layout indicated. Rhino, ribbon, rock and bark textures are available in 10 feet × 5 feet (3050 × 1580 mm) size only.

- d. Panel Standard Sizes: [12 feet × 6 feet (3650 × 1860 mm)] [10 feet × 5 feet (3050 × 1530 mm)] [8' 4" × 6' 1" (2550 × 1860 mm)].

Specifier Note: Rhino and ribbon are not available in 5/16 inch (8 mm) size.

- e. Panel Thickness: [5/16 inch (8 mm)] [3/8 inch (10 mm)] [1/2 inch (13 mm)] [3/4 inch (19 mm)] [Select thickness.].
- f. Modulus of Elasticity: 1,500,000 psi (10,335 MPa) minimum per DIN 53457.
- g. Tensile Strength: 13,000 psi (90 MPa) per DIN 53455.
- h. Flexural Strength: 14,500 psi (100 MPa) minimum per DIN 53452.
- i. Surface Impact Resistance: 4 index minimum per EN 438-2 (11).
- j. Scratch Resistance: 4 index minimum per EN 438-2 (14).
- k. Anti-Static Properties: Anti-static per DIN 51 953 and DIN 53 482.

Specifier Note: Below specifies fire performance for FR panel. Edit fire performance below based upon selected Virtuon panel:

- l. Fire Performance:
  - 1) Flamespread index of [10] [Insert applicable flamespread index for selected Virtuon panel product.] per ASTM E84 [(Type I, Class A)].
  - 2) Smoke developed index of [45 - 75] [Insert applicable smoke developed index from selected Virtuon panel product.] per ASTM E84.
- 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. Sanitation Characteristics: Suitable for FDA food preparation environments.
- q. Cleanability: Resists dirt pickup. Easily cleaned.

Specifier Note: Edit Article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

## 2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

2.03 ACCESSORIES

- A. Panel Corner Profile: [120 inches × 11.75 inches × 11.75 inches (3050 × 300 × 300 mm)], radius 3/4 inch (20 mm) [73 inches × 11.75 inches × 11.75 inches (1860 × 300 × 300 mm)], radius 3/4 inch (20 mm).
- B. Corner Profile Thicknesses: 5/16 inch and 3/8 inch (8 and 10 mm).
- C. Installation Materials: Provide [Extruded aluminum trim] [Color matched, corrosion resistant screws] [Color matched, corrosion resistant blind rivets] [Concealed, corrosion resistant metal tongues] [Joint sealant] [Adhesive] as required to suit project conditions.

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**

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise Article below to suit project requirements and specifier's practice.

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.].

Specifier Note: 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 [And adhesive] approved for use with adjoining construction.
- 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

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

**END OF SECTION**