

## PART 1 GENERAL

## 1.01 SECTION INCLUDES

- A. Glass fiber reinforced plastic panels.
- B. Trim.

## 1.02 REFERENCE STANDARDS

- A. 9 CFR 416.2 - Regulatory Requirements Under the Federal Meat Inspection Act and the Poultry Products Inspection Act, Part 416-Sanitation; current edition.
- B. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics; 2010 (Reapproved 2018).
- C. ASTM D2583 - Standard Test Method for Indentation Hardness of Rigid Plastics by Means of Barcol Impressor; 2013a.
- D. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2016.
- E. ASTM D5319 - Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels; 2012.
- F. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018b.
- G. FM 4880 - Approval Standard for Class 1 Fire Rating of Building Panels or Interior Finish Materials; 2015.
- H. ISO 846 - Plastics -- Evaluation of the action of microorganisms; 1997.
- I. ISO 2812-1 - Paints and varnishes -- Determination of resistance to liquids -- Part 1: Immersion in liquids other than water; 2007.

## 1.03 SUBMITTALS

- A. See Section 013300 - SUBMITTALS.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Samples: Submit two samples 3 by 3 inch (76 by 76 mm) in size illustrating material and surface design of panels.
- D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 016000 - Product Requirements, for additional provisions.
  - 2. Extra Panels: Quantity equal to 5 percent of total installed.

## 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Store panels flat, indoors, on a clean, dry surface. Remove packaging and allow panels to acclimate to room temperature for 48 hours prior to installation.

## PART 2 PRODUCTS

## 2.01 MANUFACTURERS

- A. Glass Fiber Reinforced Plastic Panels:
  - 1. Crane Composites, Inc; Sequentia Embossed Panels: [www.cranecomposites.com](http://www.cranecomposites.com).
  - 2. Marlite; \_\_\_\_\_: [www.marlite.com](http://www.marlite.com).
  - 3. Nudo; FiberLite FRP Wall Panels: [www.nudo.com](http://www.nudo.com).
  - 4. Or approved equal.

## 2.02 PANEL SYSTEMS

- A. Wall Panels:
  - 1. Panel Size: 4 by 8 feet (1.2 by 2.4 m) or 4 by 9 feet as required due to ceiling height.
  - 2. Panel Thickness: 0.09 inch (2.3 mm).
  - 3. Surface Design: Embossed
  - 4. Color: As selected by Architect.
  - 5. Attachment Method: Mechanical fasteners concealed by trim, with sealant in joints.

## 2.03 MATERIALS

- A. Panels: Glass fiber reinforced plastic (FRP), complying with ASTM D5319.
  - 1. Surface Burning Characteristics: Maximum flame spread index of 200 and smoke developed index of 450; when system tested in accordance with ASTM E84.
  - 2. Class C fire rated when tested in accordance with FM 4880.
  - 3. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
  - 4. Scratch Resistance: Barcol hardness score greater than 35, when tested in accordance with ASTM D2583.
  - 5. Impact Strength: Greater than 6 ft lb force per inch (320 J per m), when tested in accordance with ASTM D256.
  - 6. Sanitation and Cleanability: Comply with 9 CFR 416.2.
  - 7. Chemical Cleanability: Excellent chemical resistance to common cleaners and detergents when tested in accordance with ISO 2812-1.
  - 8. Biological Resistance: Rating of 0, when tested in accordance with ISO 846.
- B. Trim: Vinyl; color coordinating with panel.
- C. Fasteners: Nylon rivets.
- D. Adhesive: Type recommended by panel manufacturer.
- E. Sealant: ; color matching panel.

## PART 3 EXECUTION

## 3.01 EXAMINATION

- A. Verify existing conditions and substrate flatness, plumb, smoothness, uniformity and other conditions which could affect proper panel installation prior to starting work.
- B. Verify that substrate conditions have been are corrected and are ready to receive the work of this section.
- C. Verify height conditions prior to ordering panels to ensure a single panel will extend from top of base to underside of ceiling. No horizontal joints between panels are permitted.

### 3.02 INSTALLATION - WALLS

- A. Remove packaging and allow panels to acclimate to room temperature and humidity for a minimum of 48 hours.
- B. Install panels in accordance with manufacturer's instructions.
- C. Cut and drill panels with carbide tipped saw blades, drill bits, or snips.
- D. Pre-drill fastener holes in panels, 1/8 inch (3.2 mm) greater in diameter than fastener, spaced as indicated by panel manufacturer.
- E. Apply adhesive to the back side of the panel using trowel as recommended by adhesive manufacturer.
- F. Apply panels to wall with seams plumb and pattern aligned with adjoining panels.
- G. Install panels with manufacturer's recommended gap for panel field and corner joints.
- H. Drive fasteners to provide snug fit, and do not over-tighten.
- I. Place trim on panel before fastening edges, as required.
- J. Fill channels in trim with sealant before attaching to panel.
- K. Install trim with adhesive and screws or nails, as required.
- L. Seal gaps at floor, ceiling, and between panels with applicable sealant to prevent moisture intrusion.
- M. Remove excess sealant after paneling is installed and prior to curing.

### 3.03 CLEANING

- A. Clean panel surfaces in compliance with manufacturer's recommendations.
  - 1. Use a clean, damp, nonabrasive cotton cloth and a mild liquid detergent or household cleaner.
  - 2. Rinse with clean water using a clean, nonabrasive cotton cloth.
  - 3. Dry panels with a soft, clean nonabrasive cotton cloth.
  - 4. Do not use cleaners containing acid, alkali or sodium hypochlorite.

**END OF SECTION**