

## SECTION 06 64 00 - PLASTIC PANELING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes glass-fiber reinforced plastic (FRP) wall paneling and trim accessories.
- B. Related Sections:
  - 1. Section 10 26 00 "Wall and Door Protection" for corner guards installed over plastic paneling.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. LEED Submittals (Projects authorized for LEED certification only):
  - 1. Product Data for Credit IEQ 4.1: For **[adhesives] [and] [sealants]**, documentation including printed statement of VOC content.
  - 2. Product Data for Credit IEQ 4.4: For laminating adhesive **[ and composite wood products]** used in factory-laminated plastic panels, documentation indicating that product contains no urea formaldehyde.
  - 3. Laboratory Test Reports for Credit IEQ 4: For **[adhesives] [sealants] [and] [wall panels]**, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Samples for Verification: For plastic paneling and trim accessories, in manufacturer's standard sizes.

#### 1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain plastic paneling and trim accessories from single manufacturer.
- B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - 1. Flame-Spread Index: 200 or less.
  - 2. Smoke-Developed Index: 450 or less.
  - 3. Testing Agency: **[Acceptable to authorities having jurisdiction] [FM Approvals] [UL]**.

## 1.5 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install plastic paneling until spaces are enclosed and weathertight and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

## PART 2 - PRODUCTS

### 2.1 PLASTIC SHEET PANELING

- A. General: Gelcoat-finished, glass-fiber reinforced plastic panels complying with ASTM D 5319.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Standard FRP (P 100 White) by Marlite or comparable product by one of the following:
    - a. Marlite; Product [Standard FRP]: [www.marlite.com](http://www.marlite.com)
    - b. Fibertech; Product : [www.fibertech.net](http://www.fibertech.net)
    - c. Fiberglass Specialties, Inc.; Product : [www.fiberglassspecialties.com](http://www.fiberglassspecialties.com)
    - d. Kwalu LLC; Product: [Rigid Wall Covering]: [www.kwalu.com](http://www.kwalu.com)
    - e. Substitutions: See Section 01 60 00 - Product Requirements.
  2. Low-Emitting Materials: Paneling shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
  3. Nominal Thickness: Not less than 2.3 mm].
  4. Surface Finish: Match Architect's sample .
  5. Color: Match Architect's sample .

### 2.2 FACTORY-LAMINATED PLASTIC PANELS

- A. General: Gelcoat-finished, glass-fiber reinforced plastic panels complying with ASTM D 5319, laminated to [plywood] [oriented strand board] [fire-retardant particleboard] [gypsum board] [high-impact gypsum board] [moisture- and mold-resistant gypsum board].
1. Basis-of-Design Product: Subject to compliance with requirements, provide [**product indicated on Drawings**] <Insert manufacturer's name; product name or designation> or comparable product by one of the following:
    - a. Marlite; Product <Insert Note Here>: [www.marlite.com](http://www.marlite.com)
    - b. Fibertech; Product <Insert Note Here>: [www.fibertech.net](http://www.fibertech.net)
    - c. Fiberglass Specialties, Inc.; Product <Insert Note Here>: [www.fiberglassspecialties.com](http://www.fiberglassspecialties.com)
    - d. Kwalu; Product <Insert Note Here>: [www.kwalu.com](http://www.kwalu.com)
    - e. Substitutions: See Section 01 60 00 - Product Requirements.
  2. Low-Emitting Materials: Paneling shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

3. Glass-Fiber Reinforced Plastic Panel Nominal Thickness: Not less than [ **0.76 mm** ] [ **1.3 mm** ] [ **1.9 mm** ] [ **2.3 mm** ].
4. Surface Finish: [ **Smooth** ] [ **Molded pebble texture** ] [ **Smooth surface with filled grooves at 102 mm o.c. to resemble tile** ] [ **As indicated by manufacturer's designations** ] [ **Match Architect's sample** ] [ **As selected by Architect from manufacturer's full range** ].
5. Color: [ **White** ] [ **As indicated by manufacturer's designations** ] [ **Match Architect's sample** ] [ **As selected by Architect from manufacturer's full range** ].
6. Plywood: DOC PS 1, Exterior B-C, [ **6.4 mm** ] [ **9.5 mm** ] [ **12.7 mm** ] [ **15.9 mm** ] [ **19.1 mm** ] thick.
7. Oriented Strand Board: DOC PS 2, [ **6.4 mm** ] [ **9.5 mm** ] [ **12.7 mm** ] [ **19.1 mm** ] thick.
8. Fire-Retardant Particleboard: Product complying with ANSI A208.1, Grade M-S, except for modulus of rupture; with flame-spread index of 25 or less per ASTM E 84; and [ **9.5 mm** ] [ **12.7 mm** ] thick.
9. Gypsum Board: ASTM C 1396/C 1396M, [ **Regular, 12.7 mm** ] [ **Type X, 15.9 mm** ].
10. High-Impact Gypsum Board: ASTM C 1396/C 1396M, 15.9 mm, with Type X core, and [ **0.254-mm** ] [ **0.508-mm** ] [ **0.762-mm** ] [ **2.057-mm** ] plastic film laminated to back side for greater resistance to through penetration (impact resistance).
11. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M or ASTM C 1178/C 1178M, 15.9 mm, Type X, with moisture- and mold-resistant core and surfaces.
12. Laminating Adhesive: Manufacturer's standard adhesive that is recommended by AWI/AWMAC to suit application.

## 2.3 ACCESSORIES

- A. Trim Accessories: Manufacturer's standard one-piece vinyl extrusions designed to retain and cover edges of panels. Provide division bars, inside corners, outside corners, and caps as needed to conceal edges.
  1. Color: Match panels .
- B. Trim Accessories: Manufacturer's standard two-piece, snap-on vinyl extrusions designed to cover edges of panels. Provide division bars, inside corners, [ **outside corners,** ] and caps as needed to conceal edges.
  1. Color: Match panels .
- C. Exposed Fasteners: Nylon drive rivets recommended by panel manufacturer.
- D. Concealed Mounting Splines: Continuous, H-shaped aluminum extrusions designed to fit into grooves routed in edges of factory-laminated panels and to be fastened to substrate.
- E. Adhesive: As recommended by plastic paneling manufacturer.
  1. Adhesive shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2. Adhesive shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- F. Sealant: Single-component, mildew-resistant, neutral-curing silicone sealant recommended by plastic paneling manufacturer and complying with requirements in Section 07 92 00 "Joint Sealants."
- G. Retain first subparagraph below if required for LEED-NC, LEED-CI or LEED-CS Credit IEQ 4.1.
  1. Sealant shall have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
  2. Sealant shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Remove wallpaper, vinyl wall covering, loose or soluble paint, and other materials that might interfere with adhesive bond.
- B. Prepare substrate by sanding high spots and filling low spots as needed to provide flat, even surface for panel installation.
- C. Clean substrates of substances that could impair bond of adhesive, including oil, grease, dirt, and dust.
- D. Condition panels by unpacking and placing in installation space before installation according to manufacturer's written recommendations.
- E. Lay out paneling before installing. Locate panel joints [where indicated] [to provide equal panels at ends of walls not less than half the width of full panels] [so that trimmed panels at corners are not less than **300 mm** wide].
  1. Mark plumb lines on substrate at **[trim accessory]** **[panel joint]** locations for accurate installation.
  2. Locate **[trim accessories]** **[panel joints]** to allow clearance at panel edges according to manufacturer's written instructions.

### 3.3 INSTALLATION

- A. Install plastic paneling according to manufacturer's written instructions.
- B. Install panels in a full spread of adhesive.
- C. Install panels with fasteners. Layout fastener locations and mark on face of panels so that fasteners are accurately aligned.
  - 1. Drill oversized fastener holes in panels and center fasteners in holes.
  - 2. Apply sealant to fastener holes before installing fasteners.
- D. Install factory-laminated panels using concealed mounting splines in panel joints.
- E. Install trim accessories with [adhesive] [and] [nails] [or] [staples].[ Do not fasten through panels.]
- F. Fill grooves in trim accessories with sealant before installing panels and bed inside corner trim in a bead of sealant.
- G. Maintain uniform space between panels and wall fixtures. Fill space with sealant.
- H. Maintain uniform space between adjacent panels and between panels and floors, ceilings, and fixtures. Fill space with sealant.
- I. Remove excess sealant and smears as paneling is installed. Clean with solvent recommended by sealant manufacturer and then wipe with clean dry cloths until no residue remains.

END OF SECTION 06 64 00