

SECTION 07 42 00

HONEYCOMB CORE COMPOSITE BUILDING PANELS.

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes
  - 1. Preformed, pre-finished composite panels.
  - 2. Fasteners.
- B. Related Sections
  - 1. Section 05 12 00 - Structural Steel
  - 2. Section 06 10 00 - Rough Carpentry
  - 3. Section 07 21 00 - Building Insulation
  - 4. Section 07 62 00 - Sheet Metal Flashing and Trim
  - 5. Section 07 90 00 - Joint Sealants
  - 6. Section 09 20 00 - Plaster and Gypsum Board

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM)
  - 1. ASTM B209: Specification for Aluminum and Aluminum-Alloy Sheet and Plate

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01 00 00:
  - 1. Product Data: Manufacturer's product literature for the panel specified.
  - 2. Shop Drawings: Indicate thickness and dimension of parts, fastening and anchoring methods, and detail and location of joints and gaskets; including joints necessary to accommodate thermal movement.
  - 3. Samples
    - a. 2 samples of each type of panel assembly, 12 inch by 12 inch minimum.
    - b. 6 samples of each finish in color or colors selected, 3 inch by 5 inch minimum.
  - 4. Affidavit certifying that the material meets the requirements specified.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum of 5 years experience in manufacturing panels similar to those specified.
- B. Installer Qualifications: Acceptable to panel manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the project site in manufacturer's original crating, properly labeled for identification and installation purposes. Store materials in accordance with panel manufacturer's recommendations. Handle materials carefully to avoid damage to panels and finishes.

1.06 WARRANTY

- A. The Contractor shall warrant the materials to be free of faults and defects in accordance with the General Conditions, except that the warranty shall be extended by paint manufacturer's standard multi-year warranty. The warranty shall be in writing and shall be signed by the manufacturer.

## PART 2 – PRODUCTS

### 2.01 MANUFACTURER

- A. Firestone Metal Products / UNACLAD
- B. Other manufacturers seeking approval of their products must comply with requirements of Section 01 00 00 during construction.
- C. Products of other manufacturers may be considered subject to compliance with requirements as judged solely by Architect.

### 2.02 PANEL TYPE

- A. UNA-CORE Honeycomb Panel System Series 10, sandwich panel with aluminum skins laminated with a structural adhesive to an aluminum honeycomb core.
  - 1. Thickness: One inch.

### 2.03 PANEL MATERIALS AND FABRICATION

- A. Aluminum Skins: ASTM B209, Aluminum Association specification sheet 3003-H14/3105-H14 for painted finish.
  - 1. Thickness: 0.063" for spray painted finish.
- B. Core: 3003 aluminum alloy structure fabricated to form a hexagonal-shaped cell when expanded.
  - 1. Core Thickness: 0.920 inches.
  - 2. Wall Thickness: 3 mm.
  - 3. Cell Size: 3/4 inch.
  - 4. Cell walls shall be perforated and kerfed.
- C. Adhesive: Manufacturer's recommended 2-part, 100 percent solids, epoxy adhesive designed specifically for wall panel laminations.
  - 1. Adhesive shall produce a semi-elastic bond resistant to heat, cold, and moisture.
  - 2. Contact adhesives are NOT acceptable.
- D. Tolerances
  - 1. Panel bow shall be a maximum 0.5 percent of panel dimension in width and length.
  - 2. Panel dimension shall allow for fields adjustments, as recommended by manufacturer, where final dimensions cannot be established by field measurement before completion of panel manufacturing.
  - 3. Panel lines, breaks, and angles shall be sharp and true, and surfaces shall be free from warp or buckle.

### 2.04 ACCESSORIES

- A. Fasteners shall be concealed, non-corrosive type, as recommended by the panel manufacturer.
- B. Furring Channels: 25 Ga., 7/8" galvanized steel hat channels.

## 2.05 FINISHES

- A. Coil-Coated or Spray-Applied Fluorocarbon Resin
  - 1. Color: Selected by Architect/Engineer from manufacturer's standard colors.
  - 2. Number of Coats: 2-coat system except as recommended by manufacturer for color selected.
  - 3. Provide factory applied strippable plastic film for protection during fabrication and installation.

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. Examine the areas and conditions under which materials are to be installed and notify the Contractor/Construction Manager in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.
- B. Surfaces to receive panels shall be even, smooth, sound, clean, dry, and free from defects.

### 3.02 PREPARATION

- A. Obtain field measurements prior to completion of manufacturing and finishing. When field measurements are not possible, provide method of installation which will allow minor adjustment in the field.
- B. Install hat channels over substrate as indicated. Isolate galvanized steel from aluminum with elastomeric flashings.

### 3.03 INSTALLATION

- A. Erect panels plumb, level, and true.
- B. Anchor panels securely in place, in accordance with final approved shop drawings.
- C. Comply with panel manufacturer's instructions for installation of concealed fasteners.
- D. Maximum deviation from vertical-horizontal alignment of installed panels shall be 1/4 inch in 20 feet.

### 3.04 ADJUSTING AND CLEANING

- A. Repair panels with minor damage.
- B. Remove panels damaged beyond repair and replace with new panels to match adjacent undamaged panels.
- C. Clean exposed panel surfaces promptly after installation in accordance with recommendations of panel and coating manufacturers.
- D. Remove protective film immediately after installation.

...END OF SECTION 07 42 00