



SECTION 07420-Exterior Metal Panels

A. SCOPE:

1. Separation of these specifications into sections is for convenience only and is not intended to establish limits of work of subcontracts.
2. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
3. Work included, but not limited to: a. Furnish and install all prefinished exterior metal panels.
4. Related work not specified in this section: a. Structural backing to receive panels. b. Metal roofing. (Metal Roofing)

B. QUALITY ASSURANCE:

1. TECPAN panel as manufactured by Columbia Architectural Products, Inc. (10778 Tucker St., Beltsville, Maryland 20705) is specified to establish a standard of quality and design required. Other manufacturers will be considered acceptable as equal, provided the materials meet or exceed the quality and design standards specified herein.

C. SUBMITTALS:

1. Samples: Two 12" x 12" samples with specified finish in color selected, with corner section cut to show composition of panel.

D. PERFORMANCE CRITERIA:

1. Fabricate and install component parts to provide for expansion and contraction of panels over an ambient temperature range of 180 degree F without buckling, sealed joint failure, undue stress on members or anchors, and other detrimental effects.
2. Provide tight joints and effectively seal component parts of panels and their joint with contiguous work against water leakage and air infiltration. Water leakage is defined as the appearance of the uncontrolled water, other than condensation, on any inboard part of panels, either during testing or under actual weather conditions.

E. PANELS - GENERAL:

1. All aluminum panels shall be constructed to consist of a formed (Select Component "A" from Index) face, laminated to a (Select Component "B" from Index) core and formed (Select Component "C" from Index) backface. The components shall be laminated into one monolithic unit. * The adhesive used in lamination shall be permanently elastic-type neoprene rubberbase industrial contact adhesive, and shall be applied to 100% of all surface areas to be laminated using an automatic four-gun reciprocator. Adhesive bonding strength shall be equal to or better than the internal bond strength of any of the component materials. Formed pan shape back shall fit inside formed pan shaped face with one part silicone sealant applied to perimeter of panel and each corner to provide a weather-tight seal against any moisture intrusion to the interior of the panel. Thickness of finished panels to be (Select Component "D" from Index) with a tolerance of +0"/-1/16".
2. Panel face shall be formed from (Select Component "A" from Index) and back pan shall be (Select Component "C" from Index).
3. Core material shall be (Select Component "B" from Index).
4. Sealant shall be Dow Corning 999 one part silicone building sealant, or Sikaflex-la one component polyurethane base elastomeric sealant. Sealants must meet Fed. Spec. TTS-00230C Type 11 Class A.

F. METAL PROTECTION:

1. Finish on face shall be protected by strippable vinyl masking during manufacture, delivery, storage and installation of panels. Follow manufacturer's instructions with regard to removal of masking. Backface metal shall be mill finish or random unless specified otherwise.

G. PRODUCT HANDLING:

1. Panels shall be unloaded and stored in a dry space with proper blocking materials and covers to prevent damage until erection is started. Panels shall be stored off ground

(so as to prevent condensation from forming between panels or sections of panels).

H. INSTALLATION:

1. All panels may be installed with back fastened clips or in a fixed window frame system as shown on drawings. Comply with panel manufacturer's instructions and recommendations for installation, as applicable to project conditions. Install panels and other components of the work securely in place, with provisions for thermal/ structural movement.
2. Set panels level, plumb and true to line, with uniform joints. Use only types of equipment, ropes, wedges, spacers, shims and other items during erection which will not stain or mar the finish of units.
3. Exposed surfaces and edges shall be kept clean and free from sealants, metal cuttings, hazardous burrs, and other foreign materials. Stained, discolored, or damaged panels shall be removed from the site.
4. Perform all caulking operations to completely seal metal to metal contact surfaces of wall panel joints using Dow Corning 795 silicone building sealant or Sikaflex-la one component polyurethane base elastomeric sealant. All panel surfaces to be sealed with Sikaflex sealant shall be primed with (Select Component "E" from Index).

I. CLEANING AND PROTECTION:

1. Damaged Units-Replace panels and other components of the work which have been damaged or have deteriorated beyond successful repair by means of finish touch-up or similar minor repair procedures.
2. Cleaning-Leave panels free from dirt, markings, scratches, dents, warpage and other damage. Remove sealants from exposed surfaces before sealant cures. Do not use abrasives, caustic or acid cleaning agents in cleaning surfaces of panels.

*Panels with polyisocyanurate must have mechanical rivet attachment on edges.

COMPONENT SELECTION INDEX**

A. PANEL FACES:

1. Stainless Steel (18GA. or 16GA.)
 - a. No. 3 Polish Annealed Type 304
 - b. No. 4 Polish Annealed Type 304
 - c. No. 28 Brushed Annealed & Pickled Type 304
2. Anodized Anodic Aluminum (.040, .050, .063, .080, .125)
 - a. Clear
 - b. Bronze: light, medium, dark and black
3. Fluoropolymer Kynar Coated Aluminum (.040, .050, .063, .080, .125)

a. Color as selected from manufacturer's standard (special) color line.

B. CORE:

1. Exterior A/C Grade Plywood (3/411)
2. Polyisocyan u rate Urethane-2 ILB Density (111-311)
3. Semi-rigid Fiberglass (1"-31f)
4. Polystyrene (1"-3")
 - a. Extruded
 - b. Expanded

C. PANEL BACKS:

1. Mill Finish Aluminum (.032, .040, .050, .063)

2. Galvanized Steel (24GA. or 20GA.)

D. NOMINAL PANEL THICKNESS: 1" through 3"

E. SEALANT PRIMER:

1. Stainless Steel-Use Sikaflex Primer 260
2. Anodized Aluminum-Use Sikaflex Primer 260
3. Kynar Coated Aluminum-Use Sikaflex Primer 449

**Please consult with panel manufacturer for proper combinations of components.