

SECTION 07410

SEM-LOK - PREFORMED ROOF PANELS

Specifier: Notation (#) means that text following is a specifier's note or sample.

PART 1 - GENERAL

1.01 Description

Specifier: Do not alter paragraph A. except by adding section title in parenthesis.

A. General

1. Furnish all labor, material, tools, equipment, and services for all preformed (# Choose one: roofing, fascia, siding, soffit, mansard) as indicated, in accord with provisions of Contract Documents.
2. Completely coordinate with work of all other trades.
3. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.
4. See Division 1 for General Requirements.

B. Related work specified elsewhere:

1. Structural steel: Section 05100.
2. Steel joists: Section 05200 or 05400
3. Flashing and sheet metal: Section 07600.

Specifier: Delete references to sections not used and add any references to sections which are pertinent.

1.02 Quality Assurance

A. Applicable standards:

1. **SMACNA:** "Architectural Sheet Metal Manual" Sheet Metal and Air Conditioning Contractors National Association, Inc.
2. **AISC:** "Steel Construction Manual" American Institute of Steel Construction.
3. **AISI:** "Cold Form Steel Design Manual" American Iron and Steel Institute.
4. **ASTM A792-89:** Standard Specification for Steel Sheet, Aluminum-Zinc Alloy Coated by the Hot Dip Process, General Requirements
5. **ASTM A527-90:** Standard Specification for Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process, Lock-Forming Quality
6. **ASTM A526-90:** Standard Specification for Steel Sheet, Zinc, Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.

General Overview

Architectural Standing Seam Panel

Applications: Residential and Commercial

Features: Hemmed Snap Lock Design, Concealed Fastener

Coverage: 16" wide panel coverage, 1" rib height

Slope: Minimum 3:12

Substrate: 24 or 26 gauge Galvalume steel sheet or Structural Gauge CopperXT (copper clad stainless steel) or .032 Aluminum.

Finish Options: Available in Bare Galvalume, 11 SemCoat Plus colors, CopperXT

A. Applicable standards, cont.:

7. **ASTM A446-91:** Standard Specification for Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality.
8. **ASTM B 370:** Standard Specification for CopperXT sheet, copper clad stainless steel that is metalurgically bonded to both surfaces of Type 430 stainless steel.
9. **ASTM B 117:** Salt spray testing of coating 1000 Hrs.
10. **ASTM G 23:** Accelerated testing of coating 2000 hrs.

B. Manufacturer's qualifications:

1. Manufacturer has a minimum of five years experience in manufacturing panels of this nature in a permanent, stationary, indoor production facility utilizing industrial equipment.
2. Manufacturer has current nationally recognized model building code agency product approvals for fastening design pressure capacities that meet projects uplift resistance test requirements per (UL 580 Class 90 or higher).
3. Manufacturer has an approved independent quality assurance inspection program to validate certified material and finished product specifications.
4. Manufacturer has permanent ink marking on panels that identifies the manufacturer, building code approvals, and date of production for material traceability and warranty validation.
5. Manufacturer's product is listed in the UL (Underwriters Laboratory) fire resistant directory.

C. Installer's qualifications:

1. Installation of panels and accessories by installers with a minimum of two years experience in panel projects of this nature.

1.03 Submittals

A. Shop drawings:

1. Submit complete shop drawings and erection details to Architect for review. Do not proceed with manufacture prior to review of shop drawings. Do not use drawings prepared by Architect for shop or erection drawings.
2. Shop drawings show methods of erection, elevations, and plans of roof panels, sections and details, anticipated loads, flashings, roof curbs, vents, sealants, interfaces with all materials not supplied and proposed identification of component parts and their finishes.

B. Samples:

1. Submit samples and color strips for all proposed finishes.
 - a. Submit one 12 in. long sample of panel.
 - b. Submit two 2 in round color chip samples in color selected by Architect.



C. Warranty(s):

1. Metal panel manufacturer, upon final acceptance for project, furnish a warranty covering bare metal against rupture, structural failure, and perforation due to normal atmospheric corrosion exposure for a period of twenty-five (25) years.
2. Covering panel finish against cracking, checking, blistering, peeling, flaking, chipping, chalking, and fading for a period of forty (45) years.
3. Copper XT, Copper Clad Stainless Steel (50 year replacement Guarantee)

1.04 Product Delivery, Storage and Handling

A. Delivery:

1. Deliver panels to job site properly packaged to provide protection against transportation damage.

B. Handling:

1. Exercise extreme care in unloading, storing, and erecting panels to prevent bending, warping, twisting, end and surface damage.

C. Storage:

1. Store all material and accessories above ground on well skidded platforms.
2. Store under waterproof covering. Provide proper ventilation to panels to prevent condensation buildup between each panel.

Specifier: Choose the appropriate "Part 2 - Products" section that applies. If more than one type (series) is used on a project, renumber as necessary.

PART 2 - PRODUCTS

(#Sem-Lok Panel, architectural standing seam roof system, minimum slope of 3:12)

2.01 Materials

A. Panel profile:

1. 15/16" high rib x 16 in" wide panel.

B. Panel Style:

1. Narrow rib, vertical leg, concealed fastener flange, positive snap lock standing seam, utilizing male and female rib configurations.
2. Narrow rib, concealed fastener flange, positive snap lock standing seam, utilizing male and female rib configurations.

C. Gauge: (*# choose one*)

1. 24 gauge (# UL-580 Class 90 rated – Miami Dade County Product Approved).
2. 26 gauge (# UL-580 Class 90 rated – Miami Dade County Product Approved).
3. 28 gauge Copper XT, Copper Clad Stainless Steel
(# UL-580 Class 90 rated – Miami Dade County Product Approved).
4. .032 Aluminum

D. Substrate:

1. Galvalume steel sheet, AZ50, conforming to ASTM A792 for painted and unpainted panels
2. Copper XT (Copper Clad Stainless Steel), 28 Gauge, conforming to ASTM B370 for CopperXT panels
3. Aluminum

E. Texture: (*# choose one*)

1. Smooth.
2. Striations (*# minimizes oil canning effect*).

F. Finish: (*# choose one*)

1. Semcoat Plus Premium fluorocarbon coating produced with Kynar-500 or Hylar 5000 resin (*#45-year warranty*).
2. Bare Galvalume (*#25-year warranty*).
3. Copper XT, Copper Clad Stainless Steel (*# 50-year Manufacturers Replacement Guarantee*)

G. Color:

1. Selected from manufacturer's standard line.

H. Acceptable manufacturer:

1. SOUTHEASTERN METALS MFG. CO., FL,GA,
(800) 874-0335

I. Option manufacturers:

1. DOT METAL PRODUCTS., TX
(800) 331-9966
2. CONSTRUCTION METALS, INC., CA
(800) 576-9810
3. WEATHER GUARD BUILDING PRODUCTS., CO
(800) 999-6240

Insert: Architect's method of approval of "or equals."

J. Other manufacturers desiring approval, comply with Section 01630.

2.02 Fabrication

- A. Roll form panels in continuous lengths, full length of detailed runs.
- B. Fabricate trim, flashing and accessories to detailed profiles.
- C. Fabricate trim and flashing from same material as panel.



PART 3 - EXECUTION

3.01 Surface Conditions

A. Inspection:

1. Inspect installed work of other trades and verify that such work is complete to a point where this work may continue.
2. Verify that installation may be made in accordance with approved shop drawings and manufacturer's instructions.

B. Discrepancies:

1. In event of discrepancy, notify Architect.
2. Do not proceed with installation until discrepancies have been resolved.

3.02 Installation

- A. Install panels so that they are weathertight, without waves, warps, buckles, fastening, stresses or distortion, allowing for expansion and contraction.
- B. Install panels in accordance with manufacturer's installation instructions and shop drawings.
- C. Provide concealed anchors at all panel attachment locations.
- D. Install panels plumb, level, and straight with seams and ribs/battens parallel, conforming to design as indicated.

3.03 Cleaning, Protection

- A. Dispose of excess materials and remove debris from site.
- B. Clean work in accordance with manufacturer's recommendations.
- C. Protect work against damage until final acceptance. Replace or repair to the satisfaction of the Architect, any work that becomes damaged prior to final acceptance.
- D. Touch up minor scratches and abrasions.
- E. At completion of each day's work and at work completion, sweep panels and flashing clean. Do not allow fasteners, cuttings, filings or scrapes to accumulate on finished surfaces.
- F. Copper XT cleaning to remove patina caused by moisture or finger prints (see "Wrights Copper Cream")