

THERMAPLY 900-H TECHNICAL SUPPORT SPECIFICATIONS

SECTION 07410-INSULATED METAL PANELS VERTICAL PANEL APPLICATION

PART 1 - General

1.1 Scope of Work

- A. All factory assembled insulated metal skin/foam core panels for exterior closure walls.
- B. All related components, trim and flashing for a complete installation.

1.2 Quality Standard

- A. "Thermaply 900-H", by Industrial Building Panels Inc., Troy, MI 48083, (810) 588-4710

1.3 Performance and Test Requirements

A. Structural Tests:

Panel system shall be tested in accordance with ASTM E 72, with positive and negative wind loads of 20 pounds per square foot with a maximum allowable deflection of L/180.

B. Air Infiltration:

Panel system shall be tested in accordance with ASTM E 283-73, with air leakage of no greater than .02 CFM/FT² at a static pressure differential of 6.24 PSF.

C. Water Penetration:

Panel system shall be tested in accordance with ASTM E-331-70, with no water penetration after 15 minutes at a rate of 5 gallons per hour/ft² at a static pressure of 6.24 PSF.

D. Thermal Properties:

1. Isocynurate Core; 2" thickness panel units shall achieve a "U" value of .064 as manufactured, .087 aged 180 days. "U" value is corrected to 15 mph wind outside and still air inside.
2. Extruded Polystyrene core; 2" thickness panel units shall achieve a "U" value of .063 as manufactured, .086 aged 180 days.

1.4 Submittals

- A. Panel manufacturer shall submit erection and shop drawings which detail panel layout, flashing design and installation procedures.

1.5 Warranty

- A. Panel manufacturer shall warrant for two (2) years after the date of substantial completion against any defects in material or workmanship.

PART 2 - Products

2.1 Materials

A. Wall Panel Assembly:

1. 2" thickness is standard, 1" through 4" thickness are available upon request. Widths from 8" to 48" in 1/4" increments are standard.
2. Horizontal joint; Double Interlock Tongue and Groove Design allowing for concealed fastener within the joint.
3. Vertical joint; Panel manufacturer shall return the exterior skin over the vertical edge sealant surface to form trimless ends. Field fabrication of trimless ends is not allowed. Joint sealant may be a "wet seal" or "dry seal" (gasket) design. An internal gutter drainage system is available (optional).
4. Joint Sealant; Per manufacturer's recommendations in accordance with approved shop drawings.

B. Exterior Skin:

1. Substrate
 - (a) ASTM A 525 6-90 galvanized steel, 22 gage thickness. Also available in (24), (20) and (18) gage.
 - (b) Allow 3003 H-14 aluminum, .040 thickness. Also available in (.050"), (.062") and (.080") thickness.
2. Surface:
 - (a) Smooth
 - (b) Stucco Embossed
3. Finish; I.B.P. Duracoat 500 (VPF²) 20 year warranty paint finish. Refer to separate specification for complete performance and test requirements. Available in standard 1.0 mil 2-coat or optional 1.2 mil to 2.7 mil 3-coat with metallic and clear coats.
4. Protective Coating; Exterior surface shall receive a factory applied strippable plastic film, to protect the panel finish during shipping and handling.

C. Interior Skin:

1. Substrate: ASTM A 525 G-90 galvanized steel, 24 gage thickness. Also available in (22), (20) and (18) gage.
2. Surface:
 - (a) Smooth
 - (b) Stucco Embossed
3. Finish:
 - (a) I.B.P. Standard White Polyester
 - (b) I.B.P. Duracoat 500 (optional)

D. Insulation Core:

1. Isocynurate Core
2. Extruded Polystyrene

E. Fabrication: Panels skins shall be pressure laminated to the insulation core. Panels carry a 20 year warranty against bubbles, gas pockets or blistering.

F. Thermal Brake - I.B.P. Panel System is designed with a Thermal Brake. There is no metal-to-metal contact between exterior and interior skins.

G. Flashing:

1. Material; Flashing shall be of same matching material as the exterior skin (or) extruded aluminum as indicated on drawings.
2. Design; Fabricate flashing in strict accordance with manufacturer's approved shop drawings.

2.2 Fasteners

A. Types; Fastening system shall be designed to comply with wind load performance requirements and architectural aesthetics, as specified on manufacturer's approved shop drawings.

2.3 Sealant

A. Exposed; Low modulus, single component, Gun-Grade Polyurethane Joint Sealant. Furnish in sealant manufacturer's standard color as approved by architect.

B. Unexposed; Non-Skinning Butyl Curtain Wall Sealant.

PART 3 - Execution

3.1 Single Source Responsibility

A. Installer shall be under the direct supervision and employment of the wall panel manufacturer. The manufacturer is to be solely responsible for the workmanship and quality of the finished installation.

B. Installers shall have a minimum of 5 years experience in foam wall panel construction.

3.2 Inspection

A. Installer shall examine the alignment of structural support members prior to installation. If any defects are found which would adversely affect the wall panel installation, such defects shall be reported to the architect/general contractor in writing. Installation shall not begin until such defects are made correct.

3.3 Erection

A. Instructions; All wall panel construction shall be in strict compliance to manufacturer's approved shop drawings.

B. Workmanship; Erection of panels must begin plumb and level and held true to line as work proceeds.

C. Protective Coating; Remove manufacturer's strippable coating upon installation.

D. Damaged Material; Repair or replace any damaged materials to architect's satisfaction.