

All Weather CR2/CR3 Roof Panel Specifications

Pre-Insulated Metal Panels
Division 7, Section 07400

Part 1 – General

1.0.1 Description

Furnish and install all steel faced factory insulated roof panels forming the exterior roof cladding and the related accessories and trim required to make the roof air and water tight.

1.0.2 Design

The width, thickness, gauges, and core strength shall be as required to contribute to the combined action of the roof in resisting the design load of _____#/sq.ft. inward and _____#/sq.ft. outward with a deflection not to exceed L/180.

1.0.3 Shop Drawings

Contractor shall furnish detailed drawings showing location and profile of insulated roof panels, as well as location and shape of formed metal flashings, and the location and type of sealants and fasteners.

1.0.4 Substitutions

This specification is written with the CR2/3 roof panel as the basis of acceptable design, quality and performance. Requests for substitutions must be submitted in writing no less than 14 days prior to bid.

Part 2 – Products

2.0.1 Material

A. The insulated metal roof panel shall be _____” thick, 40” wide as detailed on the design drawings. The side joint shall be a standing rib design permitting exterior side installation with fasteners. The standing rib joint shall be completely concealed with a preformed snap-on cap. The concealed fasteners shall positively lock the face sheet of the panel to the structural supports and provide positive resistance to negative wind loads.

B. The panel exterior shall be _____ (2 or 3) standing rib pattern and lightly planked on 1.87” centers. The metal substrate shall be 26ga G90 Galvanized Steel coated with a 30 year ceramic polyester finish with a total dry film thickness of 1.0 mil including primer.

C. The panel interior shall have shallow V groove striations on 2.22” centers. The metal substrate shall be 26ga G90 Galvanized Steel coated with a 20 year polyester finish with a dry film thickness of 1.0 mil including primer. Color to be Imperial White.

D. The panel core shall be polyurethane/polyisocyanurate foam with a flame spread maximum of 25 and smoke developed maximum of 450 as tested in accordance with the E84 test method.

E. The installing contractor shall furnish formed metal flashings of the same gauge and color as the panel exterior.

2.02 Performance Tests

- A. The panels ability to withstand positive and negative wind loads shall be verified by testing in accordance with the ASTM E72 Vacuum Chamber Method with the standard deflection criteria to be L/180.
- B. The panel thermal properties shall be verified by actual tested values in accordance with the ASTM C518 steady state thermal transmission test method.
- C. The panel shall have Factory Mutual Class 1 approval for metal roofing construction and in accordance with the full scale FM 4880/4471 test programs.

Part 3 – Execution

- 3.0.1 The contractor/installer shall examine the alignment of the structural steel before installing the metal roof panels. The erector shall not proceed with installation if the structural steel is not within the following tolerances: -0 inward; +1/2” outward.
- 3.0.2 The metal roof panels shall be erected by an experienced metal roofing panel contractor in accordance with the approved drawings, specifications, and installation instructions.
- 3.0.3 Repair or replace any damaged or defective panels after determination of responsibility.
- 3.0.4 Manufacturer shall warrant the panels as free from defects in material and workmanship for 1 year from the date of production.