

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION RC-340

Effective August 1, 2012

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation in **July 2016**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

StratoShield Metal Roof Panels Installed Over Steel Purlins or Steel Bar Joists, manufactured by

ACI Building Systems
10125 Highway 6 West
Batesville, Mississippi 38606
Telephone: (662) 563-4574
www.acibuildingsystems.com

will be accepted for use in areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

This evaluation report is for Stratoshield standing seam metal panels installed over steel framing. The metal panels are roll-formed 24 or 22 gauge Galvalume coated steel. The panels may be installed over steel purlins or steel bar joists.

StatoShield Roof Panels: Roll-formed 22 gauge or 24 gauge AZ55 Galvalume coated steel. The panels are produced from Grade 50 steel with a minimum yield strength of 50 ksi. The panels are 24 inches wide with a 3" tall trapezoidal rib.

StatoShield Panel Clips: The base is 4.25 inches wide and the tab is 3.0 inches wide. The base and tab are G90 galvanized steel with a minimum yield strength of 50 ksi.

StratoShield Perimeter Clip: An 8 inch long version of the Panel Clip. The tab is 8 inches long and the base is 4.25 inches wide. The base and tab are G90 galvanized steel with a minimum yield strength of 50 ksi.

ITW Buildex 1/4" - 14 Hex Head Washer Head (HWH) screw: Self-drilling screws with a 1/4" diameter and 14 threads per inch. Used to fasten the clips to the steel supporting members.

SFS Intec 1/4" - 14 Hex Head Washer Head (HWH) screw: Self-drilling screws with a 1/4" diameter and 14 threads per inch. Used to fasten the clips to the steel purlins.

SFS Intec #12-24 x 1 1/4" Hex Head Washer Head (HWH) screw: Self-drilling screws with a #12 diameter and 24 threads per inch. Used to fasten the clips to the steel bar joists.

Bearing Plates: Bear plates are 3.953" x 4.933". The plates are 22 gauge with pre-punched holes for the fasteners.

LIMITATIONS

New Roof Framing Attachment: The roof framing shall meet or exceed the wind pressure requirements of the International Residential Code or International Building Code and shall be installed as required for resistance to wind loads.

Design Wind Pressures: The design pressure negative wind load resistance shall be as specified in the Assemblies listed in this evaluation report.

Installation Over an Existing Roof Covering: Not permitted.

Assembly No. 1

Design Pressure: 45 psf
Roof Framing: Minimum 0.059" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 4 feet on center.
Insulation (Optional): Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels: StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and two (2) SFS Intec or ITW Buildex $\frac{1}{4}$ - 14 x $\frac{1}{4}$ Hex Washer Head (HWH) self-drilling fasteners at each standing seam. Adjacent panels are seamed together along the side laps with an electric seaming tool with a TripleLok Seam.

Assembly No. 2

Design Pressure: 52.5 psf
Roof Framing: Minimum 0.059" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 2.5 feet on center.
Insulation (Optional): Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels: StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and two (2) SFS Intec or ITW Buildex $\frac{1}{4}$ - 14 x $\frac{1}{4}$ Hex Washer Head (HWH) self-drilling fasteners at each standing seam. Adjacent panels are seamed together along the side laps with an electric seaming tool with a TripleLok Seam.

Assembly No. 3

Design Pressure:	45 psf
Roof Framing:	Steel bar joists with $\frac{1}{8}$ " to $\frac{1}{2}$ " top chord thickness, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 4 feet on center.
Insulation (Optional):	Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels:	StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and two (2) SFS Intec#12-24x1 $\frac{1}{4}$ Hex Washer Head (HWH) self-drilling fasteners at each standing seam. Adjacent panels are seamed together along the side laps with an electric seaming tool with a TripleLok Seam.

Assembly No. 4

Design Pressure:	45 psf
Roof Framing:	Minimum 0.059" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 5 feet on center.
Insulation (Optional):	Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels:	StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and three (3) ITW Buildex $\frac{1}{4}$ - 14 screw fasteners or SFS Intec $\frac{1}{4}$ - 14 screw fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with a TripleLok Seam.

Assembly No. 5

Design Pressure:	52.5 psf
Roof Framing:	Minimum 0.059" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 5 feet on center.
Insulation (Optional):	Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.

Assembly No. 5 (continued)

Roof Panels: StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and three (3) ITW Buildex $\frac{1}{4}$ " - 14 screw fasteners or SFS Intec $\frac{1}{4}$ " - 14 screw fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a QuadLok Seam.

Assembly No. 6

Design Pressure: 60 psf
Roof Framing: Minimum 0.059" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 5 feet on center.
Insulation (Optional): Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels: StratoShield standing seam roof panels, 24" wide panels, minimum 22 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and three (3) ITW Buildex $\frac{1}{4}$ " - 14 screw fasteners or SFS Intec $\frac{1}{4}$ " - 14 screw fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a TripleLok Seam.

Assembly No. 7

Design Pressure: 60 psf
Roof Framing: Minimum 0.071" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 5 feet on center.
Insulation (Optional): Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels: StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and three (3) ITW Buildex $\frac{1}{4}$ " - 14 screw fasteners or SFS Intec $\frac{1}{4}$ " - 14 screw fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a QuadLok Seam.

Assembly No. 8

Design Pressure:	82.5 psf
Roof Framing:	Minimum 0.071" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 2.5 feet on center.
Insulation (Optional):	Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels:	StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and three (3) ITW Buildex ¼ - 14 screw fasteners or SFS Intec ¼ - 14 screw fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a QuadLok Seam.

Assembly No. 9

Design Pressure:	90 psf
Roof Framing:	Minimum 0.071" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 2.5 feet on center.
Insulation (Optional):	Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels:	StratoShield standing seam roof panels, 24" wide panels, minimum 22 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and three (3) ITW Buildex ¼ - 14 screw fasteners or SFS Intec ¼ - 14 screw fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a QuadLok Seam.

Assembly No. 10

Design Pressure:	45 psf
Roof Framing:	Minimum 0.125" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 5 feet on center.
Insulation (Optional):	Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.

Assembly No. 10 (continued)

Roof Panels: StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and two (2) SFS Intec #12-24 HWH fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a TripleLok Seam.

Assembly No. 11

Design Pressure: 52.5 psf
Roof Framing: Minimum 0.125" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 5 feet on center.
Insulation (Optional): Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels: StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and two (2) SFS Intec #12-24 HWH fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a QuadLok Seam.

Assembly No. 12

Design Pressure: 60 psf
Roof Framing: Minimum 0.125" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 5 feet on center.
Insulation (Optional): Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels: StratoShield standing seam roof panels, 24" wide panels, minimum 22 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Panel Clip and two (2) SFS Intec #12-24 HWH fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a TripleLok Seam.

Assembly No. 13

Design Pressure:	60 psf
Roof Framing:	Minimum 0.125" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 5 feet on center.
Insulation (Optional):	Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels:	StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Perimeter Clip and two (2) SFS Intec #12-24 HWH fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a QuadLok Seam.

Assembly No. 14

Design Pressure:	82.5 psf
Roof Framing:	Minimum 0.125" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 2.5 feet on center.
Insulation (Optional):	Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.
Roof Panels:	StratoShield standing seam roof panels, 24" wide panels, minimum 24 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Perimeter Clip and two (2) SFS Intec #12-24 HWH fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a QuadLok Seam.

Assembly No. 15

Design Pressure:	90 psf
Roof Framing:	Minimum 0.125" steel purlins, Grade 50 steel having a minimum yield strength of 50 ksi. Installed a maximum of 2.5 feet on center.
Insulation (Optional):	Thermax Insulation Board, Thermax Metal Building Board, Thermax Plus Liner Board, or FM Approved faced glass fiber insulation (facer side down). May be loose laid over the steel supporting members. Bearing plates are required for rigid insulation boards.

Assembly No. 15 (continued)

Roof Panels: StratoShield standing seam roof panels, 24" wide panels, minimum 22 gauge AZ55 Galvalume steel produced from grade 50 steel having a yield strength of 50 ksi. Installed perpendicular to the steel supporting members. Secured to each supporting member with one (1) StratoShield Perimeter Clip and two (2) SFS Intec #12-24 HWH fasteners at each standing seam. Adjacent panels are crimped together at each clip using a manual crimping tool. All seams are seamed together with an electric seaming tool with a QuadLok Seam.

Note: The manufacturer's installation instructions shall be available on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.