



STEEL BUILDINGS, INC.

SUPER SEAM PLUS

1. PRODUCT NAME

Whirlwind Building Components

Standing Seam Roof System

- Super Seam Plus



2. MANUFACTURER

Whirlwind Building Components

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500 Whirlwind Drive
Freeport, MN 58331
Phone: (888) 836-7203
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3. PRODUCT DESCRIPTION

Basic Use:

For roofing new buildings or reroofing existing buildings of any type. Panels are attached to the sub-structure with concealed clips that allow for thermal movement of the panels. The panels are machine-joined at the edges with a mechanically locked standing seam electric field seamer to prevent leaks. Panels are available with a Class 90 UL uplift rating.

The panels are produced with 3" high major ribs at 24" centers (this panel is also available in 18" widths). The panels comes standard in lengths up to 45'-0".



Materials:

Standard panel material

- 24 gauge steel coated both sides with a layer of (Galvalume®) aluminum-zinc alloy (approximately 55% aluminum and 45% zinc) applied by the continuous hot-dip method. Triple spot test per ASTM A-792.
- Trinar-500 colored panels are Galvalume® based material. The exterior is given a finish coat of a 70% minimum Kynar 500 PVF formulation, applied over a properly treated and primed surface. The exterior coat is 0.75 mils minimum thickness. The total exterior film thickness including primer is 0.90 to 1.10 mils thick. The interior finish is a pigmented polyester backer or water base primer.

Clip Material

- Clips are die formed, with a 20 gauge galvanized steel top section and a 14 Gauge Steel base with a Red Oxide finish. The clip base has 4 holes to accommodate attachment to the substrate. The clip top comes with factory installed mastic to match the mastic in the panel.

Flashing Material

- The flashing material is the same gauge, color and finish as the panel.

Panel Mastic

- Panel side laps have a factory applied hot melt mastic QSO Q41-20 or equivalent containing 99.85% solids by weight.
- Panel endlaps, ridge, gable and eave sealers are butyl-based pressure sensitive tape mastic that is non-staining, non-corrosive, non-volatile and non-toxic.

The tape is 100% polyisobutyleneisoprene (butyl rubber) meeting the performance requirements of Federal Specification TT-C-1796A Type II Class B. Service temperature is from -40° to +180° F.

- All gutter joints, downspout joints, rake, eave and ridge flashing laps are sealed with Schnee-Morehead SM7100 or equivalent, meeting or exceeding the test requirements of TT-S-00230C, Type II, Class A.

Fasteners

- Fasteners for connecting clips to wood are #12x 1 1/2" Type A wood grips with a hex head (2 per clip).



Corporate Head Quarters

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SUPER SEAM-PLUS DESIGN PROPERTIES								
PANEL GAUGE	F _y (KSI)	Weight (PSF)	TOP IN COMPRESSION			BOTTOM IN COMPRESSION		
			I _{xe} (In. ⁴ -Ft.)	S _{xe} (In. ³ /Ft.)	M _{axo} (Kip-In.)	I _{xe} (In. ⁴ -Ft.)	S _{xe} (In. ³ /Ft.)	M _{axo} (Kip-In.)
24	50	1.23	0.1507	0.0989	2.9619	0.3224	0.1307	3.9132
22	50	1.56	0.2059	0.1394	4.1741	0.4205	0.1708	5.1122

NOTES:

1. All calculations for the properties of Super Seam-II panels are calculated in accordance with the 2001 edition of the North American Specification For Design Of Cold-Formed Steel Structural Members.
2. I_{xe} is for deflection determination.
3. S_{xe} is for Bending.
4. M_{axo} is allowable bending moment.
5. All values are for the one foot of panel width.

- Fasteners for connecting clips to purlins are 1/4-14 x 1" hex head self drillers (2 per clip).

Light Gauge Structural System:

Basic Use

Light gauge structural steel secondary framing components from the roofing system including studs, eave struts, cees and zee sections also runners for structural supports at desired roof pitches.

Composition and Materials

Studs, cee and zee sections, eave struts and runners are a minimum of 16 gauge steel. All material comes standard with a shop applied red oxide primer. All steel meets or exceeds the requirements of ASTM A1011 and has minimum yields of 55,000 psi.

4. TECHNICAL DATA

Physical Properties:

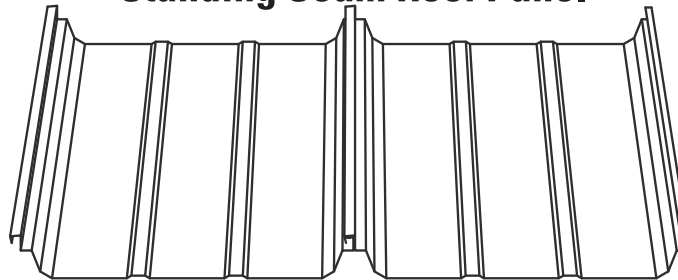
Paint Spectacular

- Specular Gloss (60° Head): ASTM D 523-25% to 40%.
- Pencil Hardness: ASTM D 3363-HB.
- Bend Adhesion: ASTM D 4145-1T, no loss of adhesion.
- Impact Adhesion: ASTM D 2794-5/8" steel ball-impact of 80 inch-pound, no loss of adhesion.
- Cross Hatch Adhesion: ASTM D 3359-no loss of adhesion.

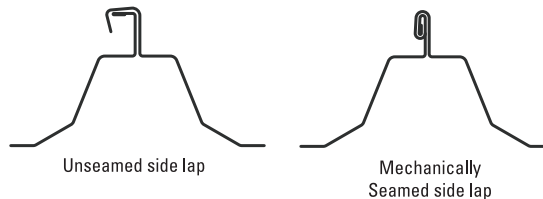
Paint System Field Performance

- Film integrity: 35 years with no blistering, peeling or cracking.
- Chalk Resistance: ASTM D 4214-3000 hours-Weatherometer-rating no greater than #8.

Super Seam-Plus Mechanically Seamed Standing Seam Roof Panel



Two Panels Show Above



Unseamed side lap

Mechanically Seamed side lap

- Color Change: ASTM D 2244-3000 hours-Weatherometer no more than 2 NBS units.

5. INSTALLATION

Minimum roof slope to be no less than 1/8:12. Panels are joined at the side-laps with an interlocking seam standing 3" above the roof plane, Sidelaps have factory applied mastic sealer and are field seamed by a special seaming machine. Installation is in conjunction with light gauge structural framing or a solid substrate.

6. AVAILABILITY AND COST

Whirlwind Building Components
8234 Hansen Road
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7. WARRANTY

Available warranties include 25 year material and 20 year weather tight-

ness, providing for repair or stoppage of any leaks caused by normal wear and tear. Paint finish warranties up to 35 years also are available.

8. MAINTENANCE

Only normal routine maintenance is required. Roofs should be inspected yearly and gutters cleaned as needed.

9. TECHNICAL SERVICES

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10. FILING SYSTEMS

Galvalume® is a registered trademark of BIEC International, Inc.

Kynar 500® is a registered trademark of Elf Autochem North America, Inc.

