## Stand’N Seam®

**ARCHITECTURAL ROOFING**

Effective September 2007

### Stand’N Seam Panel Seams

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>WT./SQ. PLAIN</th>
<th>WT./SQ. PAINTED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALUMINUM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.032&quot; (16&quot;)</td>
<td>63.2 lb.</td>
<td>64.6 lb.</td>
</tr>
<tr>
<td>0.040&quot; (16&quot;)</td>
<td>78.9 lb.</td>
<td>80.4 lb.</td>
</tr>
<tr>
<td>0.032&quot; (12&quot;)</td>
<td>69.2 lb.</td>
<td>70.7 lb.</td>
</tr>
<tr>
<td>0.040&quot; (12&quot;)</td>
<td>86.4 lb.</td>
<td>88.0 lb.</td>
</tr>
<tr>
<td><strong>GALVANIZED STEEL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 ga. (16&quot;)</td>
<td>161.7 lb.</td>
<td>163.5 lb.</td>
</tr>
<tr>
<td>22 ga. (16&quot;)</td>
<td>199.7 lb.</td>
<td>200.5 lb.</td>
</tr>
<tr>
<td>24 ga. (12&quot;)</td>
<td>176.5 lb.</td>
<td>179.1 lb.</td>
</tr>
<tr>
<td>22 ga. (12&quot;)</td>
<td>215.3 lb.</td>
<td>217.4 lb.</td>
</tr>
<tr>
<td><strong>ALUMINUM-ZINC ALLOY COATED STEEL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 ga. (16&quot;)</td>
<td>156.4 lb.</td>
<td>158.3 lb.</td>
</tr>
<tr>
<td>22 ga. (16&quot;)</td>
<td>191.5 lb.</td>
<td>193.4 lb.</td>
</tr>
<tr>
<td>24 ga. (12&quot;)</td>
<td>156.1 lb.</td>
<td>158.0 lb.</td>
</tr>
<tr>
<td>22 ga. (12&quot;)</td>
<td>209.7 lb.</td>
<td>211.7 lb.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>METAL SPECIFICATION</strong></th>
<th><strong>FINISH</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>3105-H14 or equal (20 ksi yield strength) aluminum alloy conforming to ASTM B 209.</td>
<td><strong>plain</strong>: mill finish, <strong>painted</strong>: two-coat 70% Kynar® 500/Hylar® 5000; 0.5 mil two-coat polyester backer</td>
</tr>
<tr>
<td>Grade 50 (50 ksi yield strength) with G90 coating, both conforming to ASTM A 653</td>
<td><strong>plain</strong>: regular spangle, <strong>painted</strong>: two-coat 70% Kynar® 500/Hylar® 5000; 0.5 mil two-coat polyester backer</td>
</tr>
<tr>
<td>Grade 50 (50 ksi yield strength) with AZ50 coating, both conforming to ASTM A 792</td>
<td><strong>plain</strong>: regular spangle, <strong>painted</strong>: two-coat 70% Kynar® 500/Hylar® 5000; 0.5 mil two-coat polyester backer</td>
</tr>
</tbody>
</table>

### Test Report Summaries

- **AIR INFILTRATION**: No air infiltration with 20.0 psf pressure differential per ASTM E 1680.
- **AIR EXFILTRATION**: No air exfiltration with 20.0 psf pressure differential per ASTM E 1680.
- **WATER RESISTANCE**: No water penetration under 5 gal./hr. spray at 20.0 psf pressure differential per ASTM E 1646.
- **UL90 RATING**: 24 ga. steel or 0.032" aluminum panels with stainless steel clips installed over 16 ga. purlins (Grade 50 steel) spaced at maximum of 5'-0" o.c.
- **UL90 RATING**: 24 ga. steel or 0.032" aluminum panels with stainless steel clips at maximum of 3'-0" o.c. installed over Loadmaster Roof Deck System.
- **UL90 RATING**: 24 ga. steel or 0.032" aluminum panels with stainless steel clips spaced a maximum of 4'-0" o.c. installed over 22 ga. metal deck and up to 6" of rigid insulation and bearing plates to support clips.
- **UL90 RATING**: 24 ga. steel or 0.032" aluminum panels with stainless steel clips spaced at maximum of 2'-0" o.c. over ½" plywood decking.
- **ASTM E 1592**: 24 and 22 ga. steel and 0.032" and 0.040" aluminum panels at 2'-6" and 5'-0" spans over open purlins. Design uplift loads for 24 ga. steel panels are 69.70 psf at 5'-0" clip spacing and 95.76 psf for 2'-6" clip spacing. Design uplift load for 22 ga. steel panels is 87.88 psf at 5'-0" clip spacing. Design uplift loads for 0.032" aluminum panels are 48.48 psf for 5'-0" clip spacing and 66.67 psf for 2'-6" clip spacing. Design uplift loads for 0.040" aluminum panels are 66.67 psf at 5'-0" clip spacing and 82.42 psf for 2' 6" clip spacing.
- **UL-RATED FIRE ROOFS**: 1, 1½, and 2 hour fire-rated assemblies are UL-approved. Refer to Construction Numbers P225, P510, P514, P516, P701, and P715 in the UL Fire Resistance Directory or contact Fabral.

For loading information, refer to the Stand’N Seam manual which has detailed uplift load tables for various substrates.

Oil canning is an inherent trait of light gauge metal products, particularly those with wide flat areas. Many of Fabral panels come standard with stiffening ribs, pencil beads, or shadow lines as these help minimize the appearance of oil-canning. However, due to the limitations of commercially available metals, some oil-canning should be anticipated. Oil-canning in any of Fabral’s products will not be cause for rejection of material.

Jackson, GA (800) 884-4484
Grapevine, TX (800) 477-9066
Salem, OR (800) 477-8028
Headquarters - Lancaster, PA (800) 477-2741

© 2007 FABRAL
STAND’N SEAM SPECIFICATIONS

2.01 PRODUCT DESCRIPTION

A. This product includes: Pre-finished, prefabricated, snap-together, structural standing seam roof system and accessories.

2.02 PRODUCT SUBSTITUTIONS

A. Requests to use alternate systems shall be submitted in writing to the project designer at least ten (10) days prior to bid date. Request shall demonstrate proposed substitution meets or exceeds specified performance requirements. Certified statements, samples and descriptive data shall be included in this submittal request.

B. Manufacturers listed in this section are pre-qualified manufacturers. Substitution of manufacturer’s products for those specified shall not be allowed at anytime during construction.

1.01 SUMMARY

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM)
1. ASTM A 653: Steel Sheet, Zinc-Coated by the Hot Dip Process
2. ASTM A 792: Steel Sheet, Aluminum-Zinc Alloy Coated by the Hot Dip Process.
3. ASTM B 299: Aluminum and Aluminum Alloy Sheet and Plate
4. ASTM E 393: Air leakage
5. ASTM T 331: Water penetration
6. ASTM E 168-85 Water Penetration
7. ASTM E 168-85 Air Infiltration and Exfiltration

B. Underwriters Laboratory
1. UL Building Materials Directory
2. Underwriters Laboratories Construction No. 275, 275a, 275b, and 319 for ULTrat Test 580 Class 90.

C. Sheet Metal and Air Condition Contractors National Association, Inc. (SMACNA)


D. American Iron and Steel Institute (AISI)
1. AISI Cold Formed Steel Design Manual

E. Aluminum Association
1. Aluminum Design Manual

F. Metal Construction Association (MCA)
1. Preferred Method of Standard Practice

G. Code references
1. ASCE Minimum Loads for Buildings and Other Structures
2. BOCA National Building Code
3. UFC Uniform Building Code
4. SBC Standard Building Code

1.03 SYSTEM DESCRIPTION

A. Product Data: Submit manufacturer’s specifications, standard profile sheet, product data brochure and finish warranty.

B. Drawings: Shop drawings showing roof plan with layout of panels, clips, clip attachment, underlayments and sections of flashing/trim condition shall be submitted for approval prior to fabrication. Drawings shall show material type, metal thickness and finish. Drawings shall distinguish between factory and field fabrication.

1. Submit sample 12” long x full width panel, showing proposed metal gauge, seam profile and specified finish.

2. Submit manufacturer standard colors for Architect’s selection.

C. Fasteners
1. All fasteners shall be factory fabricated and field-cut as needed.

1. Clips to substrate: screw shall be #12 diameter, self tapping type (for attachment to wood) or self-drilling, self tapping (for attachment to light gauge structural), zinc-plated steel with a low-profile, neoprene washer, color to match panel.

2. Flashings to panels: exposed screws shall be zinc plated with a #14 x 1” combination steel and phillips drive head.

3. Exposed screw shall be one-part polyurethane joint sealant. Coordinate color with roof panels.

D. Sealtants
1. Shall contain oil, asbestos, or asphalt.

2. Factory applied sealant shall be applied in the seam and designed for metal to metal conected joints.

E. Clips
1. Ridge and hip closures shall be protected and supported by a formed metal closure manufactured from the same material, color, and finish as the panels.

F. Metal closures shall be factory fabricated and field-cut as needed.

2.04 ACCESSORIES

A. Concealed roof clips: 1. pc: 18 ga. stainless steel UL50 rated clip, 3” long.

2. Provide ice and water shield membrane at all valleys.

3. Exterior coating: a Kynar® 5000 finish coating shall be applied over the primer by roll. Kynar® 5000 finish coating is a registered trademark of Ausimont USA, Inc.

4. Exposed sealant shall be one-part polyurethane joint sealant. Coordinate color with roof panels.

2.06 FABRICATION

A. Roof panels shall be formed in continuous lengths. End laps will not be allowed.

B. Panels shall be to roll formed on a stationary/industrial type rolling mill to gradually shape the sheet metal.

C. Fastener fabrication tolerances in MCA’s Preferred Metal Wall Guidelines.

E. Certifications: Submittal shall include manufacturer’s certification that materials and finishes meet specification requirements.

1.05 QUALITY ASSURANCE

A. Panel manufacturer shall have a minimum of ten (10) years of experience in manufacturing Manufactured roof systems in a stationary (indoor) facility.

B. Panel installer shall have a minimum of two (2) years experience in the installation of concealed clip 29 gauge structural standing seam roof systems and five years’ experience in successful completion of at least three (3) projects of similar size, scope, and complexity.

1.06 DELIVERY, STORAGE AND HANDLING

A. Panels and flashings shall be protected and properly packaged to protect against transportation damage in transit and stacking damage during storage.

B. Upon delivery, excess materials and accessories (including conformed samples) shall be examined to verify material type, metal thickness and finish.

C. Fasteners shall be examined to verify material type, metal thickness and finish.

D. Upon installation immediately remove strippable film from panels and flashings. Protect panels and flashings from foot traffic and from all other trades.

1.07 PROJECT CONDITIONS

A. Field dimensions shall be taken prior to fabrication to verify job site conditions.

B. Minimum recommended pitch for this panel is 1/12.

C. Minimum panel length is 40’ (contact the factory/gainer panel).