



1. Product Name

BD 1520 Pan & Batten System

2. Manufacturer

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3. Product Description

BASIC USE

Merchant & Evans, Inc., has manufactured thousands of top-quality metal roof systems that protect and beautify structures in some of the world's harshest environments.

The Merchant & Evans factory-formed BD-1520 Pan & Batten System is an architectural prefinished batten seam roofing product designed for domes, radius barrels and straight or conical tapers on slopes 3" (76 mm) or greater, as well as for vertical wall applications. The system allows for both longitudinal and lateral curvatures, and is suitable for application over solid plywood substrates, gypsum deck substrates or on top of rigid insulation over decking. The internal gutter system provides a weathertight sidejoint that does not require the use of sealant.

COMPOSITION & MATERIALS

The BD-1520 is made up of the following components:

- Formed panel
- Formed batten
- Continuous base channel
- Continuous internal gutter
- Batten clip
- Continuous gable/endwall clip
- Ridge and hip closure system

Materials include Galvalume®, aluminum, stainless steel, zinc, copper or terne coated stainless steel (TCS) according to component and in the following material thicknesses:

- Galvalume® - 24 gauge - 22 gauge
- Aluminum - 0.032" to 0.050"

- Stainless steel - 24 gauge and 22 gauge
- Zinc - 0.7, 0.8 and 1.0 mm zinc
- Copper - 16 oz and 20 oz

SIZES

Seam height is 2" (51 mm). Standard coverage systems are available in continuous lengths to 45' (13.7 m). Custom coverage systems are available upon request.

COLOR, FINISH

The BD-1520 System is available in 16 standard colors. Consult manufacturer for color choices.

The BD-1520 System is offered in smooth or stucco embossed textures, and with the following finishes:

- Kynar/Hylar and metallic fluoropolymer coatings
- Mill finish
- Brushed finish
- Anodized finish

Custom coatings are available.

BENEFITS

- Specifically designed for use with both complex roof applications and as functional architectural products
- Seams snap together for easy installation
- Continuous extruded channel and batten clips resist wind uplift
- Exterior material accommodates thermal expansion and contraction through temperature change to 200 degrees F (93 degree C)

4. Technical Data

APPLICABLE STANDARDS

ASTM International

- ASTM A446 Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality (Withdrawn 1994)
- ASTM A525 Specification for General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process (Withdrawn 1994)
- ASTM A792 Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process
- ASTM B117 Standard Practice for Operating Salt Spray (Fog) Apparatus
- ASTM D523 Standard Test Method for Specular Gloss
- ASTM D659 Method of Evaluating Degree of Chalking of Exterior Paints (Withdrawn 1989)
- ASTM D714 Standard Test Method for Evaluating Degree of Blistering of Paints
- ASTM D822 Standard Practice for Filtered



Tapered and Curved Zinc Panel

Open-Flame Carbon-Arc Exposures of Paint and Related Coatings

- ASTM D968 Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
- ASTM D1056 Standard Specification for Flexible Cellular Materials—Sponge or Expanded Rubber
- ASTM D2244 Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates
- ASTM D2247 Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
- ASTM D3281 Test Method for Formability of Attached Organic Coatings with Impact-Wedge Bend Apparatus (Withdrawn 1997)
- ASTM D3359 Standard Test Methods for Measuring Adhesion by Tape Test
- ASTM D3361 Standard Practice for Unfiltered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings
- ASTM D3363 Standard Test Method for Film Hardness by Pencil Test
- ASTM E330 Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
- ASTM E331 Standard Test Method for Water

Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference

- ASTM E1592 Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference

Underwriters Laboratories Inc. - UL 580 Tests for Uplift Resistance of Roof Assemblies

APPROVALS

Underwriters Laboratories Inc. - UL 90 Classification
Contact Merchant & Evans, Inc., for information about specific approvals by code bodies and other industry entities.

PHYSICAL/CHEMICAL PROPERTIES

See Table 1.

5. Installation

PREPARATORY WORK

Shipping

Ship products with removable plastic film placed between areas of contact to protect finished surfaces from abrasion.

Handling

Upon receipt, confirm that all materials are in manufacturer's original, unopened, undamaged containers with identification labels intact. Check for broken battens and tie-down damage between battens. Inspect for diesel smoke stain.

Unloading

Limit space between lift points to 30' (9 m) and overhangs to 15' (5 m). Use slats under slings, avoid extending forks beyond bundles and take measures to protect bottom panels.

Storage

If possible, unload bundles directly onto the installation area of the roof. Bundles must be braced if they will be placed on steep slopes and tied down to prevent wind damage if they will be left overnight. If ground storage cannot be avoided, place bundles so that panels can be removed in the sequence they are needed. Sharp bends or dips that can pond water must be prevented, with bundles covered and sloped for drainage, and ends vented.

Detailed receiving, inspection, storage and onsite roll forming information is available from the Merchant & Evans website at www.ziprib.com.

Preinstallation Procedures

Verify that site conditions are acceptable for installation. Do not proceed with installation

until unacceptable conditions are corrected.

METHODS

BD-1520 installation in the United States is completed only by experienced contractor-erectors who have been Merchant & Evans, Inc., trained and approved. Training for overseas projects is available on a job-by-job basis.

BD-1520 Pan & Batten System panels are manufactured at the factory and are installed in accordance with manufacturer's installation instructions. Attachments and joints are installed to allow for expansion and contraction from temperature changes without distortion or elongation of fastener holes. Flashing is installed in accordance with recommended practices in the Aluminum Association (AA), National Roofing Contractors Association (NRCA), Sheet Metal and Air Conditioning Contractors National Association Inc. (SMACNA) sheet metal manuals, isolated from dissimilar materials and without fasteners in end laps.

BUILDING CODES

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6. Availability & Cost

AVAILABILITY

Contact the manufacturer for information concerning local availability. Projects outside of the United States will require a technical review of specifications and architectural plans prior to quoting.

COST

Contact Merchant & Evans, Inc., for pricing information.

7. Warranty

All Merchant & Evans metal products are warrantable against defects in material and workmanship as delivered to the erector. Panels that are properly installed on an approved project by a certified installer/erector may be warranted for structural integrity, finish performance and weathertightness to meet specific project specifications. Kynar 500® and Hylar 5000® fluorocarbon resin-based coatings are fully warranted against excessive chalking, fading, chipping and blistering when used on qualifying applications. Complete warranty terms and conditions are available from Merchant & Evans, Inc.

8. Maintenance

The BD-1520 Pan & Batten System is virtually maintenance free. However, Merchant & Evans recommends a yearly inspection to ensure free drainage and proper functioning of flashing.

9. Technical Services

Merchant & Evans offers technical assistance on a wide range of and application issues and maintains a network of certified, factory trained installation professionals. Detailed information, product literature, test results, project lists, assistance in preparing project specifications and arrangements for application supervision are available by contacting Merchant & Evans, Inc.

10. Filing Systems

- Additional product information is available from the manufacturer upon request.

TABLE 1 PHYSICAL PROPERTIES	
Performance Standard	Test Result
Uniform load capacity, ASTM E1592/modified ASTM E330	1.875 times required design pressure without failure
Weather tightness, ASTM E331	No leakage at 12 psf
Factory finish	
Salt spray, ASTM B117	3000 hours for aluminum
Field blisters rating, ASTM D714	None for aluminum
Formability, ASTM D3281	No cracking or pick-off
Accelerated weathering, ASTM D822	2000 hours
Chalk rating, ASTM D659	8 - 10
Color change, ASTM D2244	No greater than 2 delta E units
Abrasion resistance, ASTM D968	55 L/mil
Humidity resistance, ASTM D2247	No field blisters, no change in pencil hardness

