

Architectural Roof & Wall Products Guide Specifications

MANUFACTURER - AEP SPAN

2141 Milwaukee Way, Tacoma, WA 98421, 800-733-4955

10905 Beech Avenue, Fontana, CA 92337

This Guide Specification is to be used to develop an office master specification or specifications for a project. In either case, this Guide Specification must be edited to fit the conditions of use. Particular attention should be given to the deletion of inapplicable provisions. Include necessary items related to a particular project. Include appropriate requirements where blank spaces have been provided.

SECTION 07411 – Preformed (Manufactured) Roof & Wall Panels

PART 1 – GENERAL

1.01 SECTION INCLUDES

The work includes, but is not necessarily limited to, furnishing and installation of all preformed metal roofing and walls, and accessories as indicated on the drawings and specified herein.

1.02 RELATED SECTIONS

Edit for project conditions. Section Numbers indicated are those recommended by CSI Masterformat; revise if numbers differ from those used in Project Manual.

- A. Structural Steel Supports: Section 05100
- B. Structural Metal Roof and Floor Decking: Section 05300
- C. Miscellaneous Fabricated Steel: Section 05500
- D. Structural Lumber Supports: Section 06100
- E. Structural Glue Laminated Lumber Supports: Section 06181
- F. Thermal Insulation: Section 07200
- G. Fireproofing: Section 07250
- H. Sheetmetal Gutters and Downspouts: Section 07600
- I. Joint Sealants not specified herein: Section 07900
- J. Finish Painting not specified herein: Section 09900

1.03 SUBMITTALS

A. PRODUCT DATA

1. Submit Manufacturer's technical product data, installation instructions and recommendations for each type of roofing and wall panel required. Include data substantiating that materials comply with requirements.

A. SAMPLES

1. Prior to ordering products, submit Manufacturer's standard color Samples for Architect's/Engineer's selection.
2. Prior to starting work, submit (quantity) 12" long Panel Samples showing shape and a representative color chip for Architect's/Engineer's acceptance.

B. SHOP DRAWINGS

1. Show panel layout, trim installation, and panel attachment.

C. SITE CONDITIONS

1. Provide completed site condition form for the specified finish to suit project condition

1.04 QUALITY ASSURANCE

A. INSTALLER'S QUALIFICATIONS

1. Installation of panels and accessories by installers with a minimum of 5 years experience on panel projects of this nature.

B. MANUFACTURER'S QUALIFICATIONS

1. Manufacturer shall have a minimum of 10 years experience supplying metal roofing/siding to the region where the work is to be done.
2. Manufacturer shall provide proof of \$2,000,000 liability insurance for their metal roof system and comply with current independent testing and certification as specified. See specific product literature for testing information.
3. Panel manufacturers without full supporting literature, Flashings & Details Guides, Guide Specifications and Technical Support shall not be considered equal to the specified product.

C. REGULATORY AGENCY REQUIREMENTS

1. Comply with UBC and local Building Code requirements if more restrictive than those specified herein.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Protect against damage and discoloration
- B. Handle panels with non-marring slings.
- C. Do not bend panels.
- D. Store panels above ground, with one end elevated for drainage.
- E. Protect panels against standing water and condensation between adjacent surfaces.
- F. If panels become wet, immediately separate sheets, wipe dry with clean cloth, and allow to air dry.
- G. Remove any strippable film coating prior to installation and do not allow it to remain on the panels in extreme cold, heat or in direct sunlight.

1.06 WARRANTY

A. MANUFACTURER'S PRODUCT WARRANTY

1. Manufacturer's standard coating performance warranty, as available for specified installation and environmental conditions. (Contact an AEP Span representative to determine actual warranty criteria.)

B. CONTRACTOR'S WARRANTY

1. Warrant panels, flashings, sealants, fasteners and accessories against defective materials and/or workmanship, to remain watertight and weatherproof with normal usage for two (2) years following Project Substantial Completion date.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

- A. AEP Span, A Division of ASC Profiles Inc, 2110 Enterprise Boulevard, West Sacramento, Calif 95691
800-733-4955
Fontana: 10905 Beech Avenue, Fontana, California 92337
Tacoma: 2141 Milwaukee Way, Tacoma, Washington 98421

B. PANEL DESIGNATION: (Choose one)

1. HR-36® Roof and Wall. Net coverage 36", rib depth 1-1/2" @7.2" o.c.
2. Reversed HR-36® Wall. Net coverage 36", rib depth 1-1/2" @7.2" o.c.
3. Reverse Box Rib Roof and Wall. Net coverage 36", rib depth 1-1/2" @ 7-13/64" o.c.
4. Box Rib Wall. Net coverage 36", rib depth 1-1/2" @ 7-13/64" o.c.
5. Mini-V-Beam. Net coverage 32", rib depth 1-3/8" @ 4-9/16" o.c.
6. Nu-Wave® Corrugated. Net coverage 32" (roof) or 34-2/3" (wall), rib depth 7/8" @ 2-2/3" o.c.

2.02 MATERIALS

A. PANELS

1. Base Metal:

a. Material:

(1) Steel conforming to ASTM A792 Zincalume®/Galvalume®, minimum yield 50,000 psi, thickness [choose one] 24 gauge (standard), 22, 20, or 18 gauge (non-standard).

(2) [For primers thicker than 0.5 mil or if gauge is 20 or 18] Steel conforming to ASTM A653 (formerly ASTM A446), G-90 Galvanized, minimum yield 40,000 psi, thickness [choose one] 24 gauge (standard), 22, 20, or 18 gauge (non-standard).

b. Protective Coating:

(1) Conform to ASTM A792, AZ50 (Zincalume/Galvalume).

(2) [For primers thicker than 0.5 mil] Conform to ASTM A924 (formerly ASTM A525) G-90 Galvanized.

2. Exterior Finish: (choose one)

a. DuraTech® 5000 (Polyvinylidene Fluoride), full 70% Kynar® 500/Hylar 5000® consisting of a baked-on 0.15-0.20 mil corrosion resistant primer and a baked-on 0.70-0.80 mil finish coat with a specular gloss of 10-30% when tested in accordance with ASTM D-523- 89 at 60°.

b. Zincalume® Plus protective coating.

c. DuraTech® mx metallic finish, consisting of a baked-on primer (0.15-0.2 mil.) and a baked-on Polyvinylidene Fluoride finish coat (0.7-0.8 mil.) with a specular gloss of 20-35% when tested in accordance with ASTM D-523-89 at 60°.

3. Interior Finish:

a. Primer Coat Material: Corrosion-resistant primer; primer coat dry film thickness: 0.15 mils; finish coat material: polyester paint, finish coat dry film thickness: 0.35 mils.

b. Color: Off-White to Light Gray

4. Color: (choose one)

a. Manufacturer's standard selection of not less than 22 colors.

b. Custom color as selected by Architect to be _____.

Custom colors are available on orders of 3,000 lft (1,500 lft mother coil) or larger. Consult an AEP Span representative for additional information.

B. FABRICATION

1. Unless otherwise shown on drawings or specified herein, panels shall be full length. Fabricate flashings and accessories in longest practical lengths.
2. Roofing panels shall be factory formed. Field formed panels are not acceptable.

PART 3 – EXECUTION

3.01 EXAMINATION

A. EXISTING CONDITIONS

1. Inspect installed work of other trades and verify that such work is complete to a point where this work may continue.
2. Verify that installation may be made in accordance with approved shop drawings and manufacturer's Instructions.

3.02 PREPARATION

A. FIELD MEASUREMENTS

1. Verify prior to fabrication.
2. If field measurements differ from drawing dimensions, notify Architect/Engineer prior to fabrication.

B. PROTECTION

1. Treat, or isolate with protective material, and contacting surfaces of dissimilar materials to prevent electrolytic corrosion.
2. Require workmen who will be walking on Roofing Panels to wear clean, soft-soled work shoes that will not pick up stones or other abrasive material, which could cause damage or discoloration.
3. Protect work of other trades against damage and discoloration.

C. SURFACE PREPARATION

1. Clean and dry surfaces prior to applying sealant.

3.03 INSTALLATION

A. PANELS

1. Follow roof panel manufacturer's directions.
2. Install panel seams (choose one) vertically or horizontally.
3. Lap panels away from prevailing wind direction.
4. Do not stretch or compress panel side-laps.
5. Secure panels without warp or deflection.

B. ALLOWABLE ERECTION TOLERANCE

1. Maximum Alignment Variation: 1/4 inch in 40 feet.

C. FLASHING

2. Follow manufacturer's directions and architect approved Shop Drawings.
3. Overlap roof panels at least 6 inches.
4. Install flashings to allow for thermal movement.
5. Remove strippable protective film, if used, immediately preceding flashing installation.

D. CUTTING AND FITTING

1. Neat, square and true. Torch cutting is prohibited where cut is exposed to final view.
2. Openings 6 inches and larger in any direction: Shop fabricate and reinforce to maintain original load capacity.

3. Where necessary to saw-cut panels, debur cut edges.

3.04 CLEAN UP AND CLOSE OUT

A. PANEL DAMAGE AND FINISH SCRATCHES

1. Do not apply touch-up paint to damaged paint areas that involve minor scratches.
2. Panels or flashings that have severe paint and/or substrate damage shall be replaced as directed by the Architect's or Owner's representative.

Note: AEP Span does not recommend touch-up painting of damaged surfaces (minor scratches, etc.) due to fading and weathering differences of the touch-up paints in comparison to factory applied paint systems.

B. CLEANING AND REPAIRING

1. At completion of each day's work and at work completion, sweep panels, flashings and gutters clean. Do not allow fasteners, cuttings, filings or scraps to accumulate.
2. Remove debris from project site upon work completion or sooner, if directed.

END OF SECTION

Zincalume® is a registered trademark of BlueScope Ltd.
Galvalume® is a registered trademark of BIEC International Inc.
KYNAR 500® is a registered trademark of Atechem North American Inc.
HYLAR 5000® is a registered trademark of Ausimont USA, Inc.

DURA TECH™ 5000 - Premium 70% Fluoropolymer (PVDF) Coating



ZINCALUME® Plus*
SRI: 65 • 24ga, 22ga & 20ga



Cool Regal White
SRI: 88 • 24ga & 22ga



Cool Parchment
SRI: 58 • 24ga & 22ga



Cool Sierra Tan
SRI: 55 • 24ga & 22ga



Cool Terra-Cotta
SRI: 41 • 24ga & 22ga



Cool Red
SRI: 46 • 24ga & 22ga



Cool Colonial Red
SRI: 35 • 24ga & 22ga



Cool Old Town Gray
SRI: 43 • 24ga & 22ga



Cool Zinc Gray
SRI: 39 • 24ga & 22ga



Cool Weathered Copper
SRI: 34 • 24ga & 22ga



Cool Dark Bronze
SRI: 32 • 24ga & 22ga



Cool Matte Black
SRI: 29 • 24ga & 22ga



Cool Tahoe Blue
SRI: 33 • 24ga & 22ga



Cool Regal Blue
SRI: 29 • 24ga & 22ga



Cool Marine Green
SRI: 47 • 24ga & 22ga



Cool Hemlock Green
SRI: 35 • 24ga & 22ga



Cool Jade Green
SRI: 29 • 24ga & 22ga



Cool Leaf Green
SRI: 30 • 24ga & 22ga



Cool Forest Green
SRI: 29 • 24ga & 22ga

Dura Tech™ coatings combine the corrosion protection of a ZINCALUME® substrate with a highly durable resin formulation and cool pigment technology to provide excellent color retention and reduces the demand for energy.

Vintage® - Premium Finish (Subject to up-charge) SRI: 22 • 24ga

Vintage coated metal is an innovative coating process over a TruZinc® G90 metallic coated steel surface producing a beautiful, durable, aged-metallic finish.

DURA TECH™ mx - Premium Fluoropolymer (PVDF) Pearlescent Coating (Subject to up-charge)



Cool Metallic Silver
SRI: 65 • 24ga & 22ga



Cool ZACTique® II
SRI: 39 • 24ga & 22ga



Cool Metallic Champagne
SRI: 54 • 24ga & 22ga



Cool Metallic Copper
SRI: 53 • 24ga & 22ga

SRI=Solar Reflective Index. SRI values in accordance with ASTM E1980 and are based on independent testing. Cool Roof Rating Council (CRRC) performance values (for CA Title 24, Energy Star) are based on color families and will differ from those listed above. Please visit www.aepspan.com for additional information. *Clear acrylic coated



KYNAR 500® OR HYLAR 5000® COLOR FINISHES – Provides excellent resistance to weathering and aging for maximum exterior durability.

	ASTM ¹	PERFORMANCE
Standard Film Thickness	D5796	0.15 - 0.25 mil primer, 0.70 - 0.80 mil top coat 0.50 mil backer coat (Polyester system applied over a primer)
Marine Environment Film Thickness	D5796	0.70 - 0.80 mil primer, 0.70 - 0.80 mil topcoat, 0.40 - 0.05 mil clear coat
Other unusual environmental conditions or specialized pigmentation may have different primer and clear coat requirements.		
Specular Gloss	D523	8-15% at 60° (Dura Tech 5000) 15-25% at 60° (Dura Tech mx)
Pencil Hardness	D3363	F-2H
Flexibility T-Bend	D4145	2T No loss of adhesion or evidence of cracking ²
Cross Hatch Adhesion	D3359	No adhesion loss
Reverse Impact	D2794	No cracking or loss of adhesion
Abrasion, Falling Sand	D968	65 liters minimum
Flame Test	E84	Class A coating
Acid Pollutants 20% Sulfuric Acid, 18hrs. 10% Muriatic Acid, 24hrs.	D1308	No bleaching No color change, no blistering
Acid Rain Test	Kesternich	15 cycles minimum
Alkali Resistance	Kesternich	No effect
Salt Spray Resistance	B117	Passes 1,000 hours, coated steel ²
Cyclic Salt Fog	B5894	2,000 hours passes adhesion
Humidity Resistance @ 100°	B2247	Passes 2,000 hours, coated steel ²
South Florida Exposure	D2244	<5 NBS units change
UVB	D822	Passes 3,000 hours
Chalk Resistance	D4214	Rating of 8 minimum
ZINCALUME® and Galvalume® substrate	A792	55% aluminum-zinc alloy coated steel with a metallic coating weight of AZ50

FINISH WARRANTIES

Limited warranties for chalk, fade and film integrity are available in durations of up to 30 years for both Dura Tech™ 5000 and Dura Tech™ mx. All AEP Span panels are offered with a corrosion warranty on Galvalume® or ZINCALUME® substrate. Terms can be affected by factors such as environment and building use. Vintage warranty varies. Inquire for details.

COMPOSITION & APPLICATION:

Dura Tech™ 5000/mx coatings are factory applied, oven cured formulas applied by approved coil coaters. They utilize Kynar 500® or Hylar 5000® PVDF resins and inorganic, IR reflective pigments for superior long-term performance. Vintage specifications vary slightly. Contact an AEP Span representative for Vintage details.

PRETREATMENT

All substrates are pre-treated in accordance with paint manufacturer's instructions. The pretreatment is to provide a suitable surface for application of the recommended primer.

¹ All tests performed to the latest ASTM revision. The test results set forth are representative of the results obtained by the paint manufacturer.

² Performances on HDG G90, ZINCALUME®, Galvalume®.

Color swatches are for reference only and are limited by printing process and viewing conditions. With metallic coatings, minor differences in both color and appearance are normal and to be expected. It is virtually impossible to match one metallic coating to another. Due to the coil application process, striations and longitudinal patterning may also show on these products. To minimize the possible visual effects of the normal minor differences in paint and its application, an entire job should be painted at one time. Additionally, fabricated panels, flat sheets, and flashings should be orientated in the same direction for installation. Contact AEP Span representative for actual color samples prior to purchase.