

Product Data

Petersen Aluminum Corp.



PRODUCT NAME

PAC-CLAD Prefinished Sheet & Coil
Aluminum & Steel

MANUFACTURER

Petersen Aluminum Corporation
1005 Tonne Road
Elk Grove Village, IL 60007
P: 800-323-1960
847-228-7150
F: 800-722-7150
www.pac-clad.com

PRODUCT DESCRIPTION

PAC-CLAD is a pre-finished specification grade aluminum sheet or a commercial quality extra-smooth galvanized or galvalume steel sheet, primed and coated with Petersen's full strength fluoropolymer (PVDF) high-performance coating system of 1.0 mil (0.025 mm) total dry film thickness and, on the reverse side, a wash coat of 0.3 -0.4 mil (0.008-0.01 mm) dry film thickness.

Basic Use: PAC-CLAD is for general sheet metal use in building applications, as well as formed roofing and wall panels produced by Petersen Aluminum. PAC-CLAD is frequently used in the following forms:

- *Roofing and mansard panels
- *Wall Panels
- *Fascia and soffit panels
- *Gravel stops and copings
- *Store front components
- *Flashing & Trim

Materials and Finishes: PAC-CLAD consists of either Aluminum Association specification ASTM B209 aluminum sheet, temper H14 or H34; hot-dipped ASTM A 653 Grade A structural quality steel sheets, AISI G90 galvanized commercial weight, or ASTM A792 Galvalume commercial weight. PAC-CLAD sheets, coil and panels are coated with a 2-coat system using a

combination of 70% Kynar 500®/ Hylar 5000® polyvinylidene fluoride (PVDF), acrylic resins, pigments and solvents. The system consists of Fluoropon® top coat applied over a polyester primer. A wash coat is applied to the reverse side for additional protection.

Standard Sizes: Aluminum is available in .032" - .063" (0.8 – 1.6 mm) thickness in 48" (1219 mm) widths. Steel is available in 24 and 22 GA in 48" (1219 mm) widths.

Colors: For standard colors, refer to Table on Page 3. Custom match colors are available in minimum quantities of 5000 lb (4540 kg) for standard gauges.

Finish: Sheens available – Dull, matte and specular, gloss rating of 25-35% at 60° viewing angle.

Textures available: Smooth

Limitations: PAC-CLAD performance depends on the integrity of the coating film, and in galvanized steel, on the underlying coating of zinc. PAC-CLAD should not be used in areas of high abrasion or where it will be subject to mechanical damage.

TECHNICAL DATA

Applicable Standards:

- Aluminum Association Specifications for Aluminum Structures
- American Iron and Steel Institute (AISI) G90 - Hot Dipped Galvanized Steel Sheet, Commercial Weight
- Specifications for Cold Formed Steel Design Manual
- American Architectural Manufacturers Assoc – AAMA 621-02

American Society for Testing & Materials (ASTM)

- ASTM A525 – Steel Sheet, Zinc-Coated by the Hot Dip Process
- ASTM A653/A653-97 – Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process, Structural
- ASTM A 792/A792M Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process
- ASTM A755/A755M – Standard Specification for Steel Sheet Metallic Coated by the Hot-Dip Process and Prepainted by the Coil Coating Process for exterior Exposed Building Products

- ASTM B209 Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate

Physical Quality

- ASTM B117-95 – Operating Salt Spray (Fog) Apparatus
- ASTM D 523 – Standard Test for Specular Gloss
- ASTM D 968 – Standard Test Methods for Abrasion Resistance for Organic Coatings by Falling Abrasive
- ASTM D 2244 – Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates
- ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
- ASTM D 2794 – Standard Test Method for Resistance of organic Coatings to the Effects of Rapid Deformation (Impact)
- ASTM D 4214 – Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films
- ASTM D 3363 - Standard Test Method for Film Hardness by Pencil Test
- ASTM D 4145 - Standard Test Method for Coating Flexibility of Prepainted Sheet
- ASTM D 3359 - Standard Test Methods for Measuring Adhesion by Tape Test
- ASTM D 1308 - Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes
- ASTM D 522 - Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings
- ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials

National Coil Coaters Association (NCCA)

- NCCA Procedure No. 11-5
- NCCA Procedure No. 11-18
- NCCA Technical Bulletin No. 11-6

Sheet Metal & Air Conditioning Contractors

National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual

Physical Properties of Fluoropolymer Coating – See PAC-CLAD Chart on Page 3

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INSTALLATION

Methods: Fabricate and install PAC-CLAD sheet metal in accordance with SMACNA sheet metal practices. PAC-CLAD can be cut, formed, nailed, screwed or riveted using conventional hand or power tools. PAC-CLAD coatings must be mechanically removed if soldering or welding is necessary. For best results, cutting edges should be kept sharp, clean, properly dressed and closely aligned.

A strippable vinyl film can be applied for protection during fabrication and installation if necessary. Vinyl film may remain on the coating during fabrication and installation. Vinyl must be removed prior to or immediately after installation.

PAC-CLAD is a finished material; care must be taken during fabrication and erection to avoid damage to the surface. Proper bend radii must be used in fabrication.

AVAILABILITY & COST

Availability: PAC-CLAD sheets are available nationwide and are stocked in standard colors and gauges for rapid shipping within 72 hours of receipt of order.

Special finishes require additional time for color matching and approvals.

There is a 5000 pound minimum for non standard colors. Delivery time and price to be quoted upon inquiry.

Cost: Contact the manufacturer for specific cost.

WARRANTY

A 30-year non-pro-rated warranty covering color, fade, chalking and film integrity is available at no additional cost. Please see our website for sample warranty. Warranty terms vary slightly for Award Blue and Cardinal Red and metallic finishes. The warranty is issued on a per project basis upon request. Contact PAC for specific requirements. There is a limited 20 year finish warranty available on perforated materials that are processed by PAC..

MAINTENANCE

Maintenance is not required. The panel finish is a member of the Teflon family and is self-cleaning. If cleaning is desired, panels can be washed with mild soap and water followed by a clean water rinse.

TECHNICAL SERVICES

Technical services are available from Petersen Aluminum Corporation and Regional architectural representatives.

STORAGE & PACKAGING

PAC-CLAD sheet and coil should be stored in a clean, dry location. Suitable facilities at the jobsite for storage and protection of the material should be provided and should be well ventilated.

Store material out of traffic areas to prevent dents, bending, abrasion, etc. Materials should be protected with waterproof paper cover – plastic should be avoided to eliminate condensation. Keep the material off the ground in an inclined position.

HQ: 1005 Tonne Road
Elk Grove Village, IL 60007
P: 800-PAC-CLAD
F: 800-722-7150

9060 Junction Drive
Annapolis Junction, MD 20701
P: 800-344-1400
F: 301-953-7627

10551 PAC Road
Tyler, TX 75707
P: 800-441-8661
F: 903-581-8592

102 Northpoint Parkway
Acworth, GA 30102
P: 800-272-4482
F: 770-420-2533

SALES OFFICE
1885 Station Parkway NW, Suite B
Andover, MN 55304
P: 877-571-2025
F: 866-901-2935

PAC-CLAD® Color Availability

PAC-CLAD STANDARD COLORS	REFLECTIVITY	EMISSIVITY	3 YEAR EXPOSURE	SRI	STEEL		ALUMINUM				ENERGY STAR	
					24 GA.	22 GA.	.032	.040	.050	.063		
AGED BRONZE	0.29	0.86	N/A	29	✓							
ALMOND	0.53	0.87	0.52	62	✓	✓	✓	✓	✓			★
ARCADIA GREEN	0.31	0.88	0.32	32	✓		✓					★
AWARD BLUE	0.21	0.86	0.20	17	✓		✓		✓			
BERKSHIRE BLUE*	0.26	0.87	0.25	25	✓							
BLACK ALUMINUM**	0.20	0.86	N/A	17			✓	✓	✓	✓		
MATTE BLACK STEEL**	0.22	0.87	0.21	20	✓	✓						
BONE WHITE	0.67	0.86	0.64	81	✓	✓	✓	✓	✓	✓		★
BURGUNDY	0.24	0.87	0.23	23	✓		✓		✓			
BURNISHED SLATE	0.32	0.86	N/A	33	✓							
CARDINAL RED	0.37	0.86	0.36	39	✓		✓		✓			★
CHARCOAL	0.27	0.87	0.27	27	✓		✓		✓			★
CITYSCAPE	0.44	0.86	0.43	49	✓	✓	✓	✓	✓			★
COLONIAL RED	0.32	0.88	0.32	34	✓		✓	✓	✓			★
DARK BRONZE	0.26	0.85	0.24	24	✓	✓	✓	✓	✓	✓		★
EVERGREEN	0.27	0.86	0.25	26	✓		✓					★
FOREST GREEN	0.10	0.87	0.10	6	✓	✓	✓	✓	✓			
GRANITE*	0.32	0.87	0.33	33	✓	✓	✓	✓	✓			★
GRAPHITE	0.29	0.86	N/A	29	✓							
HARTFORD GREEN	0.29	0.86	0.30	29	✓		✓	✓	✓			
HEMLOCK GREEN	0.29	0.86	0.30	29	✓		✓		✓			★
HUNTER GREEN	0.27	0.86	0.26	26	✓		✓					★
INTERSTATE BLUE	0.13	0.87	0.12	8	✓		✓		✓			
MANSARD BROWN	0.29	0.86	0.27	29	✓	✓	✓	✓	✓			★
MEDIUM BRONZE	0.26	0.88	0.25	26	✓	✓	✓	✓	✓	✓		★
MIDNIGHT BRONZE	0.06	0.88	N/A	0	✓			✓				
MILITARY BLUE	0.29	0.87	0.28	29	✓		✓					★
MUSKET GRAY	0.31	0.87	0.30	32	✓	✓	✓		✓			★
PATINA GREEN	0.33	0.86	0.32	34	✓		✓					★
SANDSTONE	0.49	0.87	0.49	56	✓	✓	✓	✓	✓	✓		★
SIERRA TAN	0.36	0.87	0.36	39	✓	✓	✓	✓	✓			★
SLATE BLUE	0.25	0.87	0.24	24	✓		✓					★
SLATE GRAY	0.37	0.88	0.36	40	✓	✓	✓	✓	✓			★
STONE WHITE	0.64	0.87	0.61	77	✓	✓	✓	✓	✓	✓		★
TEAL	0.26	0.87	0.26	25	✓		✓					★
TERRA COTTA	0.36	0.88	0.35	39	✓		✓		✓			★
PAC-CLAD PREMIUM COLORS												
AGED COPPER	0.26	0.87	0.25	25	✓		✓		✓			★
ANODIC CLEAR	0.54	0.81	N/A	61				✓				
CHAMPAGNE	0.40	0.82	0.36	42	✓		✓	✓	✓			★
COPPER PENNY	0.47	0.87	0.44	53	✓		✓	✓	✓			★
SILVER	0.49	0.81	0.46	54	✓	✓	✓	✓	✓			★
SILVERSMITH	0.53	0.81	N/A	60				✓				
WEATHERED COPPER	0.45	0.88	N/A	51	✓							
WEATHERED STEEL	0.32	0.89	N/A	34	✓							
WEATHERED ZINC	0.26	0.82	0.23	23	✓	✓	✓		✓			★
ZINC	0.33	0.88	0.32	35	✓		✓	✓	✓			★
CLEAR-COAT ACRYLIC FINISH (NON-KYNAR)												
GALVALUME PLUS	0.68	0.14	0.55	57	✓	✓						

PAC-CLAD Premium finishes are available from stock at a moderate extra cost. PAC-CLAD Copper Penny is a Non-Weathering finish. Solar Reflectance Index calculated according to ASTM E-1980.

*Low Gloss/Low Sheen, full 70% PVDF finish ** Appearance differs for Black Aluminum and Matte Black Steel

ENERGY STAR PERFORMANCE CRITERIA:

Emissivity uses ASTM C1371 Reflectivity uses ASTM C1549.

TECHNICAL DATA FOR KYNAR 500/HYLAR 5000 COATING:

- ▶ South Florida Exposure: Color (ASTM D 2244) - No more than 5ΔE Hunter units at 20 years; Chalk (ASTM D 4214) - Rating no less than 8 at 20 years; Film integrity - 20 years.
- ▶ Accelerated Weathering (ASTM D 4587, ASTM G 154): 5000 Hours; Chalk, per ASTM D 4214, rating of 6 or better; Color, per ASTM D 2244, < 5ΔE (Hunter Units) color change.

- ▶ Humidity Resistance (ASTM D 2247): Galvalume or HDG, 100% RH, 2000 hours - No field blisters; Aluminum, 100% RH, 3000 hours - No field blisters
- ▶ Salt Spray Resistance (ASTM B 117): Aluminum, 3000 hours, Galvalume or HDG, 1000 hours - Creep from scribe no more than 1/16", no field blisters
- ▶ Chemical/Acid Pollution Resistance (ASTM D 1308): Pass
- ▶ T-Bend (ASTM D 4145): 1T - 3T with no loss of adhesion
- ▶ Pencil hardness (ASTM D 3363): HB - 2H
- ▶ Specular Gloss (ASTM D 523) @ 60 degrees: Typical - 20 - 35

- ▶ Abrasion Resistance (ASTM D 968): 67 +/- 10 liters
- ▶ Cross Hatch Adhesion (ASTM D 3359): No loss of adhesion
- ▶ Reverse Impact (ASTM D 2794): Galvalume or HDG, 2x metal thickness inch-pounds, no loss of adhesion; Aluminum, 1.5x metal thickness inch-pounds, no loss of adhesion
- ▶ Flame Test (ASTM E 84): Class A Coating