

Guide Specification: RainScreen System (RS)

(Specifier Note: This is a guide specification for prefinished architectural panels as manufactured by Citadel Architectural Products, Inc., installed using the RainScreen System (RS) and marketed under the trade name Envelope 2000® RS. Revise section number and title below to suit project requirements, specification practices and section content. Options are indicated by brackets { }; delete non-selected text in final copy of specification.)

SECTION 07415: EXTERIOR WALL PANELS & SYSTEMS

PART 1: GENERAL

1.01 WORK INCLUDED

Section Includes: Laminated panels and attachment systems for use as exterior cladding.

(Specifier Note: Revise article below to suit project requirements. Add section numbers and title's per specifier's practice.)

1.02 RELATED SECTIONS

- A. Section 05100: Structural Framing
- B. Section 06100: Back Up Walls
- C. Section 07299: Insulation
- D. Section 07600: Metal Flashing
- E. Section 07920: Sealants
- F. Section 09200: Finishes

(Specifier Note: Revise article below to suit project requirements. Restrict to statements describing design or performance requirements of the complete wall system.)

1.03 SYSTEM DESCRIPTION

- A. Panel's exposed finishes shall perform according to AAMA 2605-98; exposed anodized aluminum according to AAMA 611-98.
- B. Panel bond integrity shall have a minimum peel strength of 34.5 lb-in/lb when tested according to ASTM D1781.
- C. Panel composite assembly shall conform to ASTM E84, Flame Spread, Class A.
- D. Panel composite assembly shall conform to NFPA 285, Intermediate Scale, Multi-Story Test.

E. Design wall system to withstand a positive and negative windload pressure acting inward and outward normal to the plane of the wall to meet the requirements of the latest adopted Local Building Code, in accordance with ASTM E72, Strength Tests For Panels For Building Construction.

F. Make adequate provisions in the wall system for thermal expansion and contraction of the component parts and fastening of the system to prevent harmful damage caused by buckling, opening of joints, expansion and contraction due to accumulation of dead loads and various live loads.

G. Water Leakage: No water infiltration into the panel system under static pressure when tested in accordance with ASTM E331 at a differential of 10% of inward acting design load, 6.24 psf (.299 kPa) minimum, after 15 minutes.

1.04 QUALITY ASSURANCE

- A. Panel Manufacturer: Manufacturer shall have a minimum of ten (10) years experience in the manufacture of ACM/MCM and must have ISO 9001:2000 Certification.
- B. Panel Installer: Installer shall be experienced in performing work of this section and be specialized in the installation of similar work required on this project.
- C. Field Measurements: When possible, measurements should be taken prior to the completion of shop manufacturing and assembly.
- D. Pre-Installation Meetings: Conduct pre-installation meetings to verify project requirements, substrate condition, installation instructions,

and warranty requirements. Comply with Division 1 Project Management and Coordination, Project Meetings Section.

(Specifier Note: Articles below list industry standards referenced in this section.)

1.05 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 1. ASTM D1781: Climbing Drum Peel for Adhesives
 2. ASTM E84: Surface Burning Characteristics
 3. ASTM E72: Strength Tests For Panels For Building Construction
 4. ASTM E331: Test For Water Penetration Of Exterior Walls By Uniform Static Air Pressure Difference
- B. Architectural Aluminum Manufacturer's Association (AAMA):
 1. AAMA 2605-98: Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels
 2. AAMA 611-98: Voluntary Specification for Anodized Architectural Aluminum
- C. National Fire Protection Association (NFPA):
 - NFPA 285: Intermediate Scale, Multi-Story Test Apparatus.

(Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor either before, during or after

construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.)

1.06 SUBMITTALS

A. Samples:

Panel: Two (2) 3"x 5" samples of each type of assembly.
Color Standards: Two (2) 3"x 5" samples of each color of finish selected.

B. Shop Drawings: Indicate thickness and dimension of parts, fastening and anchoring methods, detail and location of joints, including joints necessary to accommodate thermal movement.

C. Material Certification: Two (2) copies certifying that material meets the requirements specified.

D. Manufacturer's Literature: Two (2) copies of manufacturer's literature for panel material.

E. Test Reports: Two (2) copies of third party test reports on testing required in Section 1.03.

(Specifier Note: Article below should include special and unique requirements. Coordinate article below with Division 1 Product Requirements Section.)

1.07 DELIVERY, STORAGE AND HANDLING

A. General: Comply with Division 1 Product Requirements Section.

B. Delivery: Package all panels for protection against transportation damage in accordance with manufacturer's requirements.

C. Storage: Store all materials in accordance with manufacturer's installation instructions. Stack materials on pallets or platforms, covered with suitable ventilated covering. Do not store panels where accumulation of water may occur or in contact with other materials that might cause staining, denting or other damage.

D. Handling: All materials should be handled in a manner to prevent damage to the product in accordance with manufacturer's installation instructions.

(Specifier Note: Coordinate article below with Condition of the Contract and with Division 1 Closeout Submittals [Warranty] Section.)

1.08 WARRANTY

A. Manufacturer's Warranty: Furnish panel manufacturer's standard limited warranty document executed by an authorized company official. Manufacturer's warranty is in addition to and not a limitation of other rights Owner may have under the Contract Documents.

B. Panel Lamination Warranty: Five (5) years commencing on Date of Substantial Completion.

C. Finish Warranty:
{Kynar 500®: Twenty (20) years}
{Kynar 500® Metallic: Twenty (20) years}
{Anodized: Twenty (20) years}

PART 2: PRODUCTS

(Specifier Note: Select product paragraph below to suit project requirements. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" and "or approved equal" may cause ambiguity in the specifications. Such phrases require verification—procedural, legal, regulatory, and responsibility—for determining equivalence of products.)

2.01 EXTERIOR WALL PANELS & SYSTEMS

A. Manufacturer:
Citadel Architectural Products, Inc
3131-A North Franklin Road
Indianapolis, Indiana 46226
phone: (317) 894-9400
(800) 446-8828
fax: (317) 894-6333
(800) 247-2635
www.citadelap.com
info@citadelap.com

B. Envelope 2000® - Engineered Architectural Wall System

1. Panel Composition:

a. Face Skin:
.024" (minimum) prefinished smooth aluminum to match Architect's color selection.

b. Core:
.105" thermoset phenolic resin

c. Back Skin:
.010" primed smooth aluminum

2. Panel Tolerances

a. Thickness: ±1/32"

b. Length & Width: +0, -1/16"

c. Squareness: 1/64" per lineal foot

3. Attachment System:

RainScreen System (RS)

(Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements, Product Substitutions Procedures Section.)

2.02 SUBSTITUTIONS

A. Acceptable Alternatives: Panels of similar composition providing manufacturer has a minimum of ten (10) years experience.

B. The materials and products specified in this section establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

C. No substitution will be considered unless written request for approval has been submitted by the bidder and has been received by the Architect ten (10) days prior to the date for receipt of bids.

D. Each request shall include the name of the materials and a complete description of the proposed material, including test performance and any other information necessary for evaluation.

2.03 FINISH

- A.** Exposed Finish:
{Kynar 500®}
{Kynar 500® Metallic}
{Anodized}
- B.** Color: As selected by the Architect from panel manufacturer's Color Selection Guide.

2.04 ACCESSORIES

- A.** Fasteners and moldings as required for panel system's design by panel system manufacturer. Fastener shall be coated or stainless steel.
- B.** Weather Seals: Shall be Tremco® Spectrem® 2 or Dow Corning 795™, applied per the sealant manufacturer's guidelines and in accordance with the panel manufacturer's installation instructions.

(Specifier Note: Revise article below to suit project requirements and specifier's practice.)

PART 3: EXECUTION**3.01 EXAMINATION**

- A.** Examine and verify substrate surfaces to receive composite metal panel system and associated work and condition which work will be installed.
- B.** Maximum deviation from vertical and horizontal alignment of substrate shall be no more than 1/4" in 20'-0".

- C.** Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to installer. Starting work within a particular area will be construed as installer's acceptance of surface conditions.

3.02 PREPARATION

- A.** Comply with manufacturer's product data including product technical bulletins, product catalog installation instructions, and product carton instructions.
- B.** Surfaces to receive panels shall be even, smooth, sound, clean, and free from defects detrimental to panel installation.
- C.** Field measure and verify dimensions as required.
- D.** Protect adjacent areas or surfaces from damage as a result of the work of this section.

(Specifier Note: Coordinate article below with panel fabricator's recommended installation details.)

3.03 INSTALLATION

- A.** Sheathing and water resistant membrane (if specified) by others.
- B.** Erect panels level and true to intended plane.
- C.** Anchor panels securely in place in accordance with manufacturer's/fabricator's approved Shop Drawings.

- D.** Maximum deviation from vertical and horizontal alignment of erected panel system shall be no more than 1/4" in 20'-0".

- E.** Maximum deviation in panel flatness shall be 0.6% of the assembled units.
- F.** Conform to panel manufacturer's installation instructions for attachment systems.
- G.** Weather seal all joints as required using methods and materials as recommended by the panel manufacturer's/fabricator's installation instructions.

(Specifier Note: Coordinate article below with Division 1 Execution Requirements, Cleaning Section.)

3.04 CLEANING

- A.** Remove temporary coverings and protection to adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance.
- B.** Remove and legally dispose of construction debris from project site.

END OF SECTION

