



**American Products, Inc. – 3 Part Specification
Aluminum-Framed Entrances & Storefronts API
Impact Aluminum Framed Storefront Doors
08 4113**

PART 1 GENERAL

Furnish all necessary materials, labor, and equipment for the complete installation of the aluminum swing doors, door frames, hardware, and storefront framing system as shown on the drawings and specified herein.

1.01 SUMMARY

- A. Section includes: Aluminum Swing Doors, including:
 - 1. API Impact Resistant Heavy Duty Swing Doors.
- B. Related Sections:
 - 1. Sealants: Refer to Division 7 Joint Treatment Section for sealant requirements.
 - 2. Glass and Glazing: Refer to Division 8 Glass and Glazing Section for glass and glazing requirements.

1.02 SYSTEM PERFORMANCE DESCRIPTION

- A. Performance Requirements: Aluminum swing doors shall meet all requirements of ASTM E 1886, ASTM E 1996 and South Florida Building Code Protocols TAS 201, TAS 202, and TAS 203 and comply with the following specific performance requirements indicated.
 - 1. Air Infiltration: Air infiltration shall be tested in accordance with ASTM E 283 at static pressure of 6.24 psf (299Pa). Infiltration shall not exceed the following:
 - a. 0.065 cfm/linear foot of crack based on a door size of 3'6" x 8'.
 - 2. Water Infiltration: No uncontrolled water other than condensation on indoor face of any component tested in accordance with ASTM E 331 at a test pressure differential of 10 psf (479 Pa). Water test to be performed immediately after design pressure test. Standard 35H Entrances are intended for 1st floor applications.
 - 3. Structural: Door corner structural strength shall be tested per dual moment test procedure and certified by an independent testing laboratory to ensure corner integrity and weld compliance. Certified test procedures and results are available upon request.
 - 4. Structural Uniform Load Test:
 - a. Doors:
 - i. Positive Pressure:
 - ii. Negative Pressure:
 - 5. Forced Entry Resistance: Tests performed simultaneously with 300 lb. forces applied to the active door panel within 3" of the locks in the direction that would tend to open the door while 150 lb. forces are applied in both perpendicular directions to the 300 lb. force simultaneously.

1.03 SUBMITTALS

- A. General: Prepare, review, approve, and submit specified submittals in accordance with "Conditions of the Contract" and Division 1 Submittals Section.
- B. Product data, shop drawings, samples, and similar submittals are defined in "Conditions of the Contract". Product Data: Submit product data for each entrance series specified.
- C. Substitutions: Whenever substitute products are to be considered, supporting technical data, samples, and test reports must be submitted ten (10) working days prior to bid date in order to make a valid comparison.
- D. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, and finish colors.



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- E. Samples: Submit verification samples for colors. Minimum 2½ inch by 3 inch (61mm by 73 mm) samples on actual aluminum substrates indicating full color range expected in installed system.
- F. Quality Assurance / Control Submittals:
 - 1. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties.
 - 2. Installer Qualification Data: Submit installer qualification data.
- G. Close-out Submittals:
 - 1. Warranty: Submit executed warranty documents specified herein, endorsed by API authorized official and installer.
 - 2. Project Record Documents: Submit project record documents, including operation and maintenance data for installed materials in accordance with Division 1 Project Close-out (Project Record Documents) Section.

1.04 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Installer Qualifications: Installer experienced (as determined by contractor) to perform work of this section who has specialized in the installation of work similar to that required for this project. If requested by Owner, submit reference list of completed projects.
 - 2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction process.
- B. Mock-Ups (Field Constructed): Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, and workmanship standard.
 - 1. Mock-Up Size:
 - 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
 - 3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.
- C. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

1.05 PRODUCT CONDITIONS / SITE CONDITIONS

- A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.

1.06 WARRANTY

- A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by an authorized company official.
 - 1. Warranty Period: Manufacturer's one (1) year standard warranty commencing on the substantial date of completion for the project provided that the warranty, in no event, shall start later than six (6) months from the date of shipment by American Products Inc.

EDITOR NOTE: Longer warranty periods are available at additional cost.



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PART 2 PRODUCTS

It is the intent of this specification to have a single source responsibility for the supply of the aluminum doors and framing systems on this project. Any deviation from the acceptable manufacturers listed below must be approved in writing by the architect at least ten (10) days prior to bid date.

2.01 MANUFACTURERS

(Acceptable Manufacturers/Products)

- A. Acceptable Manufacturers: American Products Inc.
12157 West Linebaugh Ave. #335
Tampa, FL. 33626
Telephone: (813) 925-0144; Fax: (813) 925-1414
www.americanprod.com
 - 1. Impact Resistant Entrances: API Impact Resistant and Entrances.
 - 1. Description: 3-1/2" Door Stile, 1-3/4" thick.
- H. Corner Construction: Fabricate door corners joined by concealed reinforcement secured with screws and sigma deep penetration welding.
- I. Glazing: Manufacturer's standard glazing stops with EPDM glazing gaskets to prevent water infiltration at the exterior and structural silicone sealant with fixed stops at the interior.
- J. Weather-stripping: Manufacturer's standard elastomer type in replaceable rabbets for stiles and rails.
- K. Hardware: (1-1/2 to 2) pair of Grade 1 mortise butt hinges per leaf. Ball bearing 4-1/2" x 4" NRP Stainless Steel US32D finish.
 - a. Adams Rite MS1850 three point hook bolt lock on active leaf or single door. (1) Adams Rite two point lock on inactive leaf.
 - b. (2) Keyed cylinders (thumb turn on inside optional). Standard API push/pull, surface mounted closer (hold open optional).
 - c. mill finish aluminum threshold

2.02 MATERIALS

- A. Extrusions: ASTM B 221 (ASTM B 221M), 6063-T5 Aluminum Alloy.
- B. Aluminum Sheet:
 - 1. Anodized Finish: ASTM B 209 (ASTM B 209M), 5005-H14 Aluminum Alloy, 0.050" (1.27 mm) minimum thickness.
 - 2. Painted Finish: ASTM B 209 (ASTM B 209M), 3003-H14 Aluminum Alloy, 0.080" (1.95 mm) minimum thickness.

2.03 ACCESSORIES

- A. Manufacturer's Standard Accessories:
 - 1. Fasteners: Zinc plated steel concealed fasteners; Hardened aluminum alloys or AISI 300 series less steel exposed fasteners, countersunk and finish to match aluminum color.
 - 2. Perimeter Sealant: Non-skinning type, AAMA 803.3.
 - 3. Glazing: Setting blocks, edge blocks, and spacers in accordance with ASTM C 864, shore durometer hardness as recommended by manufacturer. Glazing gaskets in accordance with ASTM C 864.
 - 4. Glazing Adhesive: Dow Corning® 995 Structural Silicone Sealant



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2.04 FABRICATION

- A. Shop Assembly: Fabricate and assemble units with joints only at intersection of aluminum members with uniform hairline joints; rigidly secure, and sealed in accordance with manufacturer's recommendations.
1. Hardware: Drill and cut to template for hardware. Reinforce frames and door stiles to receive hardware in accordance with manufacturer's recommendations.
 2. Welding: Conceal welds on aluminum members in accordance with AWS recommendations or methods recommended by manufacturer. Members showing welding bloom or discoloration on finish or material distortion will be rejected.

2.05 FINISHES AND COLORS

- A. Anodized Finish:
1. Clear Anodized
 2. Medium Bronze Anodized
 3. Dark Bronze Anodized
- B. Anodized Finishing: Prepare aluminum surfaces for specified finish; apply shop finish in accordance with the following:
1. Anodic Coating: Electrolytic color coating followed by an organic seal applied in accordance with the requirements of AAMA 612-02. Aluminum extrusions shall be produced from quality controlled billets meeting AA-6063-T5.
 - a. Exposed Surfaces shall be free of scratches and other serious blemishes.
 - b. Extrusions shall be given a caustic etch followed by an anodic oxide treatment and then sealed with an organic coating applied with an electro-deposition process.
 - c. The anodized coating shall comply with all of the requirements of AAMA 612-02: Voluntary Specifications, Performance Requirements and Test Procedures for Combined Coatings of Anodic Oxide and Transparent Organic Coatings on Architectural Aluminum. Testing shall demonstrate the ability of the finish to resist damage from mortar, salt spray, and chemicals commonly found on construction sites, and to resist the loss of color and gloss.
 - d. Overall coating thickness for finishes shall be a minimum of 0.7 mils.
- C. High Performance Organic Coating Finish:
1. Fluoropolymer Type: Factory applied two-coat 70% Kynar resin by Arkema or 70% Hylar resin by Solvay Solexis, fluoropolymer based coating system, Polyvinylidene Fluoride (PVF-2), applied in accordance with AAMA 2605 specifications. Colors:
 2. Selected by Architect from the following:
 - a. Standard coating color charts.
 - b. Custom coating color charts.
 - c. Color Name and Number:
- D. Finishes Testing:
1. Apply 0.5% solution NaOH, sodium hydroxide, to small area of finished sample area; leave in place for sixty minutes; lightly wipe off NaOH. Do not clean area further.
 2. Submit samples with test area noted on each sample.



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PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS / RECOMMENDATIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, installation instructions, and product carton instructions. The latest Installation Manual can be found at www.americanprod.com.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions.
 - 1. Verify location of preset anchors, perimeter fasteners, and block-outs are in accordance with shop drawings.

3.03 PREPARATION

- A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.
 - a. Aluminum Surface Protection: Protect aluminum surfaces from contact with lime, mortar, cement, acids, and other harmful contaminants.

3.04 INSTALLATION

- A. General: Install manufacturer's system in accordance with shop drawings, and within specified tolerances.

3.05 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Upon request, provide manufacturer's field service consisting of site visit for inspection of product installation in accordance with manufacturer's instructions.

3.06 ADJUSTING AND CLEANING

- A. Adjusting: Adjust swing doors for operation in accordance with manufacturer's recommendations.
- B. Cleaning: The General Contractor shall clean installed products in accordance with manufacturer's instructions prior to owner's acceptance, and remove construction debris from project site. Legally dispose of debris.
- C. Protection: The General Contractor shall protect the installed product's finish surfaces from damage during construction.

END OF SECTION

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