American Products, Inc. – 3 Part Specification
Aluminum-Framed Entrances & Storefronts API
Aluminum Framed Storefront Doors
08 41 13

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Aluminum Swing Doors, including:
   1. Narrow Stile Swing Entrances.
   2. Medium Stile Swing Entrances.
   3. Wide Stile Swing Entrances.

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: Provide aluminum swing doors that comply with performance requirements indicated, as demonstrated by testing manufacturer's assemblies in accordance with test methods indicated.
   1. Air Infiltration (Single Acting Butt Hinges, Center Pivots, Continuous Geared hinges or Offset Pivots): Air infiltration shall be tested in accordance with ASTM E 283-91 at static pressure of 1.57 PSF (75 Pa). Infiltration shall not exceed the following:
      a. For Single Doors: 0.50 CFM/FT² of total door and frame area.
      b. For Pair of Doors: 1.0 CFM/FT² of total door and frame area.
   2. 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
      a. Results are available upon request.
   3. Uniform Load Test:
      a. For Narrow Stile Single Doors: 30 psf.
      b. For Narrow Stile Pair of Doors: 30 psf.
      c. For Medium Stile Single Doors: 30 psf.
      d. For Medium Stile Pair of Doors: 30 psf.
      e. For Wide Stile Single Doors: 30 psf.
      f. For Wide Stile Pair of Doors: 30 psf.
   4. Forced Entry Resistance: 300 lbs. satisfactory.

1.03 PROJECT 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.

1.04 SUBMITTALS

A. General: Prepare, review, approve, and submit specified submittals in accordance with "Conditions of the Contract" and Division 1 Submittals Sections. Product data, shop drawings, samples, and similar submittals are defined in "Conditions of the Contract."
B. 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

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D. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, and finish colors.
E. Samples: Submit verification samples for colors. Minimum 2-1/2 inch by 3 inch (61 mm by 73 mm) samples on actual aluminum substrates indicating full color range expected in installed system.
F. Quality Assurance / Control Submittals:
    I. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and
    2. Physical properties.
    3. Installer Qualification Data: Submit installer qualification data.
G. Closeout Submittals:
    I. Warranty: Submit executed warranty documents specified herein, endorsed by American Products Inc. 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 Closeout (Project Record Documents) Section.
        a. Maintenance Data: Maintenance procedures for care and cleaning of entrance systems.

1.05 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.

1.06 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

2.01 MANUFACTURERS

(Acceptable Manufacturers/Products)

A. Acceptable Manufacturers: American Products Inc.
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Tampa, FL. 33626
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1. Narrow Stile Swing Doors: Narrow Stile Swing Doors.
   a. Description: 2" Door Stile.
2. Medium Stile Swing Doors: Medium Stile Swing Doors.
   a. Description: 3-1/2" Door Stile
3. Wide Stile Swing Doors: Wide Stile Swing Doors.
   a. Description: 5" Door Stile
4. Corner Construction: Fabricate door corners joined by concealed reinforcement secured with screws and sigma deep penetration welding.
5. Glazing Stops: Manufacturer's standard snap-in glazing stops with EPDM glazing gaskets to prevent water infiltration.
6. Weather-stripping: Manufacturer's standard pile type in replaceable rabbets for stiles; manufacturer's standard EPDM bulb type in door frames.
7. Hardware: Manufacturer's standard as selected by Architect.

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 stainless steel exposed fasteners, countersunk, finish to match aluminum color.
2. 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.

2.04 RELATED MATERIALS (Specified In Other Sections)

A. Glass: Refer to Division 8 Glass and Glazing Section for glass materials.

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2.05 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 method recommended by manufacturer. Members showing welding bloom or discoloration on finish or material distortion will be rejected.

2.06 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.
   2. Colors: Selected by Architect from the following:
      1. Standard coating color charts.
      2. Custom coating color charts.
      3. 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 instructions are available 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.
   I. 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.
   1. 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.
   1. Protect aluminum members in contact with masonry, steel, concrete, or dissimilar materials using nylon pads or bituminous coating.
   2. Shim and brace aluminum system before anchoring to structure.

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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