

**PART 1 GENERAL****1.01 SUMMARY**

- A. Section Includes: Aluminum Sun Shades:
  - 1. YKK AP Series ThermaShade® Aluminum Sun Shade System
- 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.
  - 3. Single Source Requirement: All products listed below shall be by the same manufacturer.
    - a. Section 08 32 13 Sliding Aluminum-Framed Glass Doors.
    - b. Section 08 41 13 Aluminum-Framed Entrances and Storefronts.
    - c. Section 08 44 13 Glazed Aluminum Curtain Wall.
    - d. Section 08 51 13 Aluminum Windows.
    - e. Section 08 44 33 Sloped Glazing Assemblies.
    - f. Section 10 71 13 Exterior Sun Control Devices.

**1.03 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 type sunshade and curtain wall 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, finish colors and textures.

**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 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.

**1.06 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 YKK AP America Inc.

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

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS (Acceptable Manufacturers/Products)

- A. Acceptable Manufacturers:
  - YKK AP America Inc.
  - 101 Marietta Street NW, Suite 2100
  - Atlanta, GA 30303
  - Telephone: (678) 838-6000; Fax: (678) 838-6001
1. Curtain Wall System: YKK AP ThermaShade® Aluminum Sun Shade System.
- B. Sun Shade System:
  1. Description: All structural components and attachment hardware shall be concealed.
  2. Thermally improved anchor: Sunshade anchor must provide a continuous thermal barrier by means of a poured and debridged pocket consisting of a two-part, chemically curing high density polyurethane which is bonded to the aluminum by YKK AP ThermaBond Plus™. Anchors employing non-structural thermal barriers are not acceptable.

### 2.02 MATERIALS

- A. Extrusions: ASTM B 221 (ASTM B 221M), 6063-T5 and 6063-T6 Aluminum Alloys.
- B. Aluminum Plate:
  1. Painted Finish: ASTM B 209 (ASTM B 209M), 3003-H14 Aluminum Alloy, 0.25" (6.35 mm) nominal thickness.

### 2.03 ACCESSORIES

- A. Manufacturer's Standard Accessories:
  1. Fasteners: AISI 300 series stainless steel fasteners.

### 2.05 FABRICATION

- A. Shop Assembly: Fabricate and assemble units with joints only at intersection of aluminum members with hairline joints; rigidly secured, in accordance with manufacturer's recommendations.

### 2.06 FINISHES AND COLORS

- A. YKK AP America Anodized Plus® Finish:
 

CODE	DESCRIPTION
YS1N*	Clear Anodized Plus®
YH3N	Champagne Anodized Plus®
YB1N	Medium Bronze Anodized Plus®
YB5N*	Dark Bronze Anodized Plus®
YK1N*	Black Anodized Plus®
YW3N	White Anodized Plus®
M	Mill Finish

\* Indicates standard finish usually carried as inventory.

Anodized Plus® is an advanced sealing technology that completely seals the anodic film yielding superior durability (See AAMA 612).

- 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. 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 electrodeposition process.
- c. The anodized coating shall comply with all of the requirements of AAMA 612: 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 YKK AP procedures and meeting AAMA 2605 specifications.
  - 2. Colors: 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.

### 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.ykkap.com](http://www.ykkap.com).

#### 3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions.

#### 3.03 PREPARATION

- A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.

#### 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. Verify curtain wall system allows water entering system to be collected in gutters and wept to the exterior. Verify weep holes are open, and metal joints are sealed in accordance with manufacturer's installation instructions.
  - 4. Seal metal to metal curtain wall system joints using sealant recommended by system manufacturer.

#### 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. 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 installed product's finish surfaces from damage during



construction.

**END OF SECTION**

This document supersedes any previous version.