

SECTION 12 24 00  
WINDOW SHADES

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

Manually operated, roll-up fabric interior window shades are specified in this section. Window shades shall be furnished complete, including brackets, fittings and operating hardware.

**1.2 RELATED WORK**

COLOR OF SHADE AND COLOR OF EXPOSED PARTS OF CONTROL MECHANISMS (INCLUDING TAPES AND CORDS):

- A. Section 06100 - Rough Carpentry: Blocking for support of window shade hardware.
- B. Section 07900 - Joint Sealers: Sealants for perimeter of shade system.
- C. Section 09260 - Gypsum Board Assemblies: Suspended gypsum board ceilings to contain recessed window shade pockets.
- D. Color, pattern and texture: See Finish/Material Schedule on A-603.

**1.3 QUALITY CONTROL**

Manufacturer's Qualification: manufacturer shall provide evidence that the manufacture of shades are a major product, and that the shades and all components and hardware have performed satisfactorily on similar installations.

**1.4 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples:
  - 1. Shade fabric, each type, 600 mm (24 inch) square, including cord and ring, showing color, finish and texture.
  - 2. Fascia L-shaped aluminum extrusion showing color and finish.
- C. Manufacturer's literature and data; showing details of construction and hardware for:
  - Window shades
  - Manually operated controls
  - Mounting hardware and brackets

## 1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced to in the text by the basic designation only.
- B. Federal Specifications (Fed. Spec.):
  - AA-V-00200B.....Venetian Blinds, Shade, Roller, Window, Roller, Slat, Cord, and Accessories
- C. American Society for Testing and Materials (ASTM):
  - A167-99(R2009).....Stainless and heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip
  - B221/B221M-08.....Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
  - D635-10.....Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position
  - D648-07.....Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position
  - D1784-08.....Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
- D. FPA 70 - National Electrical Code.
- E. GREENGUARD Environmental Institute Children & Schools
- F. US Green Building Council.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

#### FABRIC

- A. Light-Filtering Fabrics
  - 1. Sheer translucent
    - VOC Emissions: GREENGUARD Children & Schools certified as a low emitting fabric. Manufacturer to supply GREENGUARD Children & Schools certificate. 500 denier fiberglass, vinyl coated and woven into a 2 by 2 basket weave. Fire rating: NFPA 701-1999TM#1 (small scale), NFPA 101 (Class A Rating), UBC (Class 1). Bacterial and Fungal Resistance: ASTM G 21 and ASTM G 22. 14.26 oz/sq yd, .019 inches thick. 5 percent open.

## 2.6 FABRICATION

### MANUALLY OPERATED WINDOW SHADES

Manually Operated Window Shades with Independent Control: Manually operated, vertical roll-up, fabric window shade with components necessary for complete installation.

1. Operation: Bead chain and clutch operating mechanism allowing shade to stop when chain is released. Designed never to need adjustment or lubrication. Provide limit stops to prevent shade from being raised or lowered too far.
  - a. Clutch mechanism: Fabricated from high carbon steel and molded fiberglass reinforced polyester or injected molded nylon.
  - b. Bead chain loop: Stainless steel bead chain hanging at side of window.
  - c. Idler Assembly: Provide spring loaded idler assembly of molded nylon with adjustable length idler pin to facilitate easy installation, and removal of shade for service.
2. Mounting:
  - a. End caps and fascia.
3. Roller Tube: Fabricated from extruded aluminum, galvanized steel, or enameled steel. Diameter, wall thickness, and material selected by manufacturer to accommodate shade type and size. Fabric connected to the roller tube with LSE (low surface energy) double sided adhesive specifically developed to attach coated textiles to metal. Adhesive attachment to eliminate horizontal impressions in fabric.
4. Shade slat: Slat encased in heat seamed hem.
5. Fascia: L shaped aluminum extrusion to conceal shade roller and hardware.
  - a. Attachment: Snaps onto end caps without requiring exposed fasteners of any kind. Fascia can be mounted continuously across two or more shade bands.
  - b. Finish: Ivory powder coat.
  - c. Mounting Location: Mount fascia inside window opening extending from jamb to jamb.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Window Shades: Mount window shades on end of face brackets, set on metal gussets, or casing of windows as required. Provide extension face brackets where necessary at mullions.
  1. Locate rollers in level position as high as practicable at heads of windows to prevent infiltration of light over rollers.

2. Where extension brackets are necessary, on mullions or elsewhere, for alignment of shades, provide metal lugs, and rigidly anchor lugs and brackets.
3. Place brackets and rollers so that shades will not interfere with window hardware or frame.
4. Mount shades at wire mesh window guards on head rails of hinged frame.
5. Mount shades at detention, or protection screens on head rail (room side) of hinged frame, with face brackets located approximately 38 mm (1-1/2 inches) from outside edges.
6. Shade installation methods not specifically described, are subject to approval of VA COR.
7. Install in accordance with manufacturer's instructions.
8. Install roller shades level, plumb, square and true. Allow proper clearances for window operation hardware in accordance with manufacturer's recommendations and instructions.
9. Install the following items to conceal roller and operating mechanism. Do not use exposed fasteners.
  - a. Fascias.
10. Test window shades to verify that operating mechanism, fabric retainer, and other operating components are functional. Correct deficiencies.
  - a. Chair and clutch.
  - b. Demonstrate operation of shades to VA COR prior to leaving job site.
11. Protect installed products until completion of job.
12. Touch-up, repair or replace damaged products before Substantial Completion.
13. Refer to Drawings for shade types and locations.
14. Use same room designations as indicated on the Drawings, field verified window dimensions, quantities, type of shade, controls, fabric and color and include opening sizes and key to typical mounting details.
15. Install roller shades after finish work and ambient temperature, humidity and ventilation conditions are maintained at levels recommended for project upon completion.

16. Do not deliver window shades until building is enclosed and construction within spaces where shades will be installed is substantially complete.

**PART 4 - WARRANTY**

1. Hardware and Shade Fabric: Manufacturer's standard twenty-five year limited warranty.

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