
WDMA/UL 10b Neutral Pressure

Part 1 General**1.1 SUMMARY**

- A. Section Includes:
 - 1. Prefinished standard and fire rated type wood doors with flush faces.
 - 2. Prefit and premachine pre-finished wood doors.

- B. Related Sections:
 - 1. Section 06100 - Rough Carpentry.
 - 2. Section 06460 - Wood Frames.
 - 3. Section 08110 - Hollow Metal Doors and Frames.
 - 4. Section 08710 - Hardware.
 - 5. Section 08810 - Glazing: Glass and glazing for doors.
 - 6. Section 06405 - Architectural Woodwork.

1.2 REFERENCES

- A. WDMA - Window and Door Manufacturers Association: IS 1-A Industry Standard for Architectural Flush Wood Doors.

- B. NFPA-80 Standards for Fire Doors Edition.

- C. Underwriters Laboratory: UL 10b, Neutral Pressure Fire Door Test Method.

- D. NFPA-105 Recommended Practice for Installation of Smoke-Control Door Assemblies.

1.3 SUBMITTALS

- A. Shop Drawings and Product Data:
 - 1. Submit in accordance with Section 01330.
 - 2. Indicate general construction, jointing methods, hardware and louver locations, and locations of cut-outs for glass. Indicate thickness of veneers.

- B. Samples:
 - 1. Submit samples of wood veneer and factory finishing in accordance with WDMA Quality Standards I.S. 1-A.

- C. Certification:
 - 1. Submit certification that doors and frames comply with UL10b, Neutral Pressure Fire Door Test Method.

1.4 QUALITY ASSURANCE

- A. Fire-Rated Wood Doors: Provide wood doors which are identical in materials and construction to units tested in door and frame assemblies in accordance UL10b, Neutral Pressure Fire Door Test Method and which are labeled and listed for ratings indicated by ITS - Warnock Hersey, UL or other testing and inspection agency acceptable to authorities having jurisdiction.
 - 1. Doors: Comply with UL10b where required.
 - 2. Provide smoke gaskets as required by manufacturers' individual authorities in compliance with UL10b.

- B. WDMA I.S. 1-A Quality Standard: Window and Door Manufacturers Association Quality Standards for grade of door, core, construction, finish, and other requirements.

- C. Temperature Rise Rating: At stairwell enclosures, provide doors which have Temperature Rise Rating of 250 degrees F maximum in 30 minutes of fire exposure.

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1.5 PRODUCT HANDLING

- A. Plastic wrap and protect wood doors during transit, storage and handling to prevent damage, soiling or deterioration. Follow the Care and Installation guidelines as described in WDMA I.S. 1-A.

1.6 GUARANTEE/WARRANTY

- A. Guarantee: Provide manufacturer's guarantee for all wood doors. Guarantee period: Lifetime of original installation. Door exhibiting defects in materials or workmanship within guarantee period shall be replaced (including hanging and finishing) with new doors. These terms shall be part of the manufacturer's standard warranty.

Part 2 Products

2.0 ACCEPTABLE MANUFACTURERS

- A. GRAHAM
- B. Marshfield Door Systems
- C. VT Industries

2.1 MATERIALS

- A. Door Construction:
 - 1. Non-Fire Rated Doors: Thickness: 1-3/4 inches, interior flush wood, bonded, solid core conforming to WDMA I.S. 1-A and the following;
 - a. Core: bonded particle core (PC) conforming to WDMA I.S. 1-A.
 - b. ANSI/WDMA I.S. 1-A Aesthetic Grade: Premium
 - c. Vertical Edges: Hardwood to match face veneer over structural composite lumber (SCL), glued to the core.
 - d. Horizontal Edges: Mill option hardwood or structural composite lumber, glued to core.
 - e. Facing: Wood veneer cut and specie as specified shall conform to WDMA I.S. 1-A "A" grade for Premium Grade Door Construction requirements.
 - f. ANSI/WDMA I.S. 1-A Performance Duty Level: Standard Duty / Heavy Duty / Extra-Heavy Duty **(Specify)**.
 - 2. Fire Rated Doors: Thickness: 1-3/4 inches, interior flush wood, bonded, solid core conforming to WDMA I.S. 1-A and the following;
 - a. Core: bonded Fire Resistive Composite (FD) conforming to WDMA I.S. 1-A.
 - b. Construction: WDMA I.S. 1-A Premium Grade.
 - c. Vertical Edges: Hardwood to match face veneer over fire resistive composite as required by manufacturer's fire door authorities, glued to the core.
 - d. Horizontal Edges: Fire resistive composite as required by manufacturer's fire door authorities, glued to core.
 - e. Facing: Wood veneer cut and specie as specified shall conform to WDMA I.S. 1-A "A" grade for Premium Grade Door Construction requirements.
 - f. ANSI/WDMA I.S. 1-A Performance Duty Level: Standard Duty / Heavy Duty / Extra-Heavy Duty **(Specify)**.
- B. Wood Veneer
 - 1. Door face veneers shall meet quality standards conforming to WDMA I.S. 1-A "A" grade / "AA" grade **(specify)** for transparent or semi-transparent finish. Minimum face veneer thickness shall be 1/50" at 12% moisture content after finish sanding.
 - 2. Species: **(specify)**
 - 3. Face Cut: Plain Sliced / Rotary Cut / Rift Cut / Quarter Sliced / Flat Cut. **(specify)**
 - 4. Face Assembly: book Match / Slip Match / Random Match. **(specify)**
 - 5. Face Symmetry: Running Match / Balanced Match / Center Balanced Match. **(specify)**
- C. Adhesives
 - 1. Adhesives: Face to core adhesives shall be Type I or Type II as appropriate for location in building. Adhesives must be classified Type I or Type II per WDMA TM-6 "Adhesive Bond Test Method." Type I adhesives shall be used for doors in exterior applications, Type II adhesives shall be used for doors in interior applications.
- D. Core
 - 1. Non-rated and 20 minute doors: Solid particleboard.
 - 2. Fire-rated doors: Fire Resistive composite.

EDIT NOTE: Select species and cut, and appearance, refer to WDMA I.S. 1-A Quality Standards for requirements and descriptions of material. Drawings to indicate where different species are located.

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Part 2 Products (continued)

2.2 FACTORY FINISHING

EDIT NOTE: Refer to WDMA I.S. 1-A Quality Standards for finish system description.

- A. Finish System:
 - 1. Comply with referenced WDMA Section F-1, "Factory Finishing" for Premium Grade factory finish systems.
 - 2. Pre-finish wood doors at factory.
 - 3. Transparent Finish: Match finish indicated in WDMA Section F-3: WDMA System #6.
 - 4. ANSI/WDMA I.S. 1-A Performance Duty Level: Standard Duty / Heavy Duty / Extra-Heavy Duty (**Specify**).

2.3 ACCESSORIES

- A. Vision Frames:
 - 1. Non-rated doors: Flush wood frames, hardwood to match facing.
 - 2. 20 minute fire rated doors: Provide manufacturer's tested metal clip or comparable system with wood stop appearance.
 - 3. Fire-rated doors: ITS - Warnock Hersey or UL approved glazing system.
 - 4. Glass: Refer to Section 08810 for glass types.

2.4 FABRICATION

- A. Fabricate wood doors in accordance with requirements of WDMA I.S. 1-A Quality Standards.
- B. Fabricate fire rated doors in accordance with requirements of ITS - Warnock Hersey or Underwriters' Laboratories, with metal label on each door including UL-10b.
- C. Fabricate doors with WDMA Quality Standards hardware blocking options as follows:
 - 1. Provide HB-1 - head and HB-2 - sill rails and HB-4 - lockblock on all doors.
 - 2. Provide HB-6 only when exit devices are specified for door.
 - 3. Provide HB-8 for pivots or when floor bolts are specified under Section 08710 - Finish Hardware.
- D. Make cut-outs and provide stops for glass and louvers. Install metal door louvers. Seal cut-outs prior to installation of moldings.
 - 1. For full light doors: Provide cut out from flush wood door, with vertical grain direction.
- E. Bevel lock and hinge edges of single acting doors 3 degrees or 1/8 inch in 2 inches. Radius strike edge of double acting swing doors as required by pivot hinge manufacturer.
- F. Prepare doors to receive hardware. Refer to Section 08710 - Hardware, NFPA 80 Edition and UL 10b Neutral Pressure Fire Door Test Method for hardware requirements.
 - 1. Prefit and bevel to net opening size less approximately 1/4 inch in width on single swing doors 3/16 inch in width for paired doors. Provide 1/4 inch clearance above finished floor, unless otherwise indicated on drawings. Provide 1/8 inch clearance at top of door.
 - 2. Slightly ease vertical edges.
- G. Fire Rated Pair of Doors; greater than 20 minute: Supply overlapping astragals or metal edge sets only as required by NFPA 80 or by door manufacturer's fire door authorities. If an astragal is required, to comply with fire rated labeling requirements for pairs of fire rated doors, provide door manufacturer's standard tested astragal.

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Part 3 Execution

3.0 EXAMINATION

- A. Examine installed door frames before hanging doors.
- B. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.1 INSTALLATION

- A. Handle doors in accordance with recommendations of WDMA I.S. 1-A, "How to Store, Handle, Finish, Install and Maintain Wood Doors."
- B. Condition doors to average temperature and humidity in area of installation for not less than 48 hours prior to installation. Store doors per recommendations of WDMA I.S. 1-A, "Care and Installation at Job Site."
- C. Install in neat and workmanlike manner, free from hammer or tool marks, open joints or slivers.
- D. Set plumb, level, square and true. Install work after building humidity is at acceptable level.
- E. Remove and replace all doors found to be warped, twisted, bowed, or otherwise damaged. Do not install doors which cannot be properly fitted to frames.
- F. Adjust prefinished doors and hardware and other moving or operating parts to function smoothly and correctly.
- G. If doors are to be field finished, the process must follow the WDMA I.S. 1-A, "Care and Handling at Job Site" instructions for field applied finishes.
- H. Ensure that smoke gaskets are in-place before prefinished door installation.

3.2 CLEANING / PROTECTION

- A. Clean prefinished doors and hardware.

EDIT NOTE: Delete "B" below if doors are prefinished.

- B. At clear finished doors, do not partially cover door surfaces with paper, cardboard, or any other opaque covering that will create uneven aging of wood veneer.
- C. Protect doors as directed under Section 01700.
- D. Refinish or replace finished doors damaged during installation.