

SECTION 08211 – VINYL ACRYLIC CLAD WOOD DOORS

PART 1– GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division I Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This section includes, but is not limited to the following:

1. Furnishing high impact resistant Vinyl Acrylic Acrovyn[®] Door Systems flush doors.
2. Factory fitting flush Vinyl Acrylic Acrovyn[®] Door Systems doors to frames and factory machining for hardware.

- B. Related Sections include the following:

1. Division 6 Section 06100 Rough Carpentry
2. Division 8 Section 08111 Standard Steel Doors and Frames
3. Division 8 Section 08710 Finish Hardware
4. Division 8 Section 08800 Glass and Glazing

1.3 REFERENCES

- A. UL-10C Positive Pressure fire tests of door assemblies, Underwriters Laboratories, Inc.
- B. NFPA 101 Life Safety Code, National Fire Protection Association
- C. NFPA 252 Standard methods of fire tests of door assemblies, National Fire Protection Association
- D. WDMA TM-6 Test methods for determining the performance of adhesive bonds in doors under accelerated aging conditions, Window and Door Manufacturers Association
- E. WDMA TM-7 Test method to determine the physical endurance of wood doors & associated hardware connections under accelerated operating conditions, Window and Door Manufacturers Association
- F. WDMA TM-8 Test methods to determine hinge loading resistance of wood door stiles, Window and Door Manufacturers Association
- G. WDMA TM-10 - Test method to determine the screw holding capacity of wood door stiles, Window and Door Manufacturers Association

1.4 SUBMITTALS

- A. Product Data: For each type of door, submit manufacturer's data sheets including details of core and edge construction.

- B. Shop Drawings: Submit complete schedule indicating location, size, hardware sets, swing of each door; elevation of each type of door and construction details not covered in product data and other pertinent data. Indicate dimensions and locations of mortises and holes for hardware.
 - 1. Indicate dimensions and locations of cutouts.
 - 2. Indicate fire-ratings for fire doors.
- C. Samples for verification

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain high impact resistant Acrovyn® Door Systems flush wood doors through one source from a single manufacturer.
- B. Quality Standard: Comply with WDMA Industry Standard (I.S. IA-04 “Architectural Wood Flush Doors”).
 - 1. Door shall meet all performance attributes for the following performance duty level: Extra Heavy Duty.
 - 2. Tolerances for warp, telegraphing, squareness and prefitting dimensions as per the latest edition of WDMA I.S. 1-A.
- C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-ratings indicated, based on testing according to UBC Standard 7-2, UL-10C Positive Pressure and NFPA 252.
- D. Where fire rated doors are required, provide doors labeled by Intertek/Warnock Hersey. Construction details and hardware application shall be as approved by the labeling agency.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Comply with requirements of referenced standard and manufacturer's written instructions.
- B. Package doors individually using foam interleaf and stack on pallet, not exceeding 15 doors per pallet.
- C. Mark each door with opening number used on shop drawings.
- D. Do not store doors in damp areas.
- E. Do not subject doors to extreme conditions or changes in heat, dryness or humidity in accordance with the latest edition of WDMA I.S. 1-A.
- F. Doors should be lifted and carried when being moved, not dragged across one another.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver doors or install doors until building is enclosed, wet work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.

1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that are defective in materials or workmanship. Conditions are subject to the terms set forth in the manufacturer's warranty.
 - 1. Solid-Core Interior Doors: provide manufacturer's lifetime limited written warranty guarantee against warpage, delamination and defects in materials and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Subject to compliance with all requirements, provide one of the following:
 - 1. Construction Specialties, Inc. Acrovyn[®] Door Systems (800) 416-6586

2.2 DOOR CONSTRUCTION, GENERAL

- A. Construction Grade: WDMA Extra Heavy Duty Door
- B. Thickness: standard 1-3/4"
- C. Crossbanding to be .125" tempered hardboard.
- D. Vinyl Acrylic Face Laminate: selection shall be one of the standard products of C/S Group Acrovyn[®] Chameleon, Acrovyn[®] solid color, or approved equal. Vinyl Acrylic Acrovyn[®] base color must be integral throughout to prevent discoloration caused by scratching.
 - 1. Wood grain pattern to give appearance of one entire wood veneer – book matching or slip matching appearance not acceptable.
- E. 1/8" in 2" bevel on both the strike and hinge edges
- F. Doors shall be prefit and beveled at the factory to fit the openings. Prefit tolerances shall be in accordance with the requirements of WDMA I.S. 1-A, latest edition.
- G. Doors shall be machined in the factory for mortised hardware items.
- H. Provide internal reinforcement where surface mounted hardware is required.

2.3 FLUSH FIRE RATED VINYL ACRYLIC WOOD DOORS

- A. Manufacturer's standard (7) ply, mineral-core construction as needed to provide fire rating indicated (90-minutes), (45-minutes) and (20-minutes).

1. Core: Non-combustible mineral core, comply with the following
 - a. Containing no asbestos
 - b. 25-32 lb/ft³ density
- B. Blocking: provide blocking approved for use in doors of fire ratings indicated as needed to eliminate through-bolting for surface applied hardware.
- C. Seven-ply construction. Vinyl Acrylic Face Veneers are to be applied to the crossbanding core using Type I exterior waterproof adhesive.
- D. Vinyl Acrylic Face Veneers are to be High impact .040" Acrovyn of the following type:
 1. Acrovyn[®] Chameleon #381 Figured Anigre
- E. Door stiles: 1-1/2" (before trimming) mineral composite fixed interior stile
 1. WDMA TM-8 "Hinge Loading Resistance" Extra Heavy Duty - 550 lb.
 2. WDMA TM-10 Screw Holding Capacity" Extra Heavy Duty - 700 lb.
- F. Door edges: Stile edges of doors shall have the laminate edges applied prior to the application of the face laminates. Edges of door to be of the following material choices or combination thereof:
 1. Vinyl Acrylic .040" Acrovyn[®] Chameleon wood grain, select from nine patterns
 2. Vinyl Acrylic .040" Acrovyn[®] solid color, select from sixty standard colors
- G. Durability performance
 1. Cycle Slam WDMA TM-7, 1990
 2. Face Veneer Wear Index - Abrasion Resistance Testing - ASTM D4060-90: 28,000 cycles
 3. Face Veneer Impact Resistance - ASTM D-4226: 86 in/lb.

2.4 LEAD LINED DOORS ACROVYN[®] DOOR SYSTEM, INTERIOR

- A. (7) ply Non-fire rated and 20 minute bonded, wood door construction
 1. Core: Particleboard cores comply with the following:
 - a. Particle board, 32 lb/ft³ density
 - b. Comply with ANSI A208.1, Grade LD-2
 - c. Blocking: 5-inch (125-mm) top rail blocking in doors indicated to have closers
 - d. Stiles and rails are to be securely bonded to the core
- B. Vinyl Acrylic Face Laminates are to be high impact .040" Acrovyn[®] Chameleon or Acrovyn[®] solid color vinyl/acrylic.
- C. Vinyl Acrylic Face Laminates are to be applied to the crossbanded core using Type I exterior waterproof adhesive.

- D. 1/8 or 1/16" Lead Crossbanding on each side for balanced construction.
- E. Top and bottom rails shall be factory sealed with an approved wood sealer.
- F. Door Stiles: 1-3/8" (before trimming) fixed interior stile.
- G. Exposed fixed door edges: Edge of door to be of the following material choices or combination thereof:
 - 1. Extruded Vinyl Acrylic: .040" Acrovyn® Chameleon wood grain or metal pattern, select from nine patterns
 - 2. Extruded Vinyl Acrylic: .040" Acrovyn® solid color, select from sixty standard colors
- H. Durability Performance
 - 1. Face Veneer Wear Index - Abrasion Resistance Testing - ASTM D4060-90: 28,000 cycles
 - 2. Face Veneer Impact Resistance - ASTM D-4226: 86 in/lb.

2.5 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated, with the following uniform clearances unless otherwise indicated:
 - 1. For fire rated doors comply with clearance requirements of referenced quality standard for fitting in accordance with requirements listed in NFPA 80.
- B. Factory machine doors for hardware that is not surface applied. Comply with final hardware schedules, door frame shop drawings, and hardware templates.
 - 1. Coordinate measurements of hardware mortises in metal frames. Contractor or door distributor to verify dimensions and alignment before factory machining.

2.6 LITE FRAMES

- A. Metal Lite kits primed for field painting by All Metal Stamping model 110.

2.7 FABRICATION

- C. Factory fit doors to suit frame-opening sizes indicated, with the following uniform clearances unless otherwise indicated:
 - 1. For fire rated doors comply with clearance requirements of referenced quality standard for fitting in accordance with requirements listed in NFPA 80.
- D. Factory machine doors for hardware that is not surface applied. Comply with final hardware schedules, door frame shop drawings, and hardware templates.

1. Coordinate measurements of hardware mortises in metal frames. Contractor or door distributor to verify dimensions and alignment before factory machining.
- E. Lite openings must be cut by the manufacturer or by a certified machining distributor.

PART 3 - INSTALLATION

3.1 EXAMINATION

- A. Examine doors and installed door frames before hanging doors.
1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs. Adjust frames to plumb condition before door installation. Tolerances for warp, squareness and pre-fitting dimensions shall be as per latest edition of WDMA I.S. IA-04.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Division 8 Section "Door Hardware".
- B. Manufacturer's written instructions: Install doors to comply with manufacturer's written instructions, referenced quality standard and as indicated.
1. Install fire rated doors in corresponding fire-rated frames according to NFPA-80.
- C. Factory fitted doors: Align in frames for uniform clearance at each edge.

3.3 ADJUSTING

- A. Operating: Re-hang or replace doors that do not swing or operate freely.
- B. Finished doors: Replace doors that are damaged or do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 08211