Care & Finishing, and Installation

Care & Finishing:

Care & Finishing Instructions (WDMA Recommendations):

1. Acclimatize - Prior to painting, insure that the building atmosphere is dried to a normal interior relative humidity and temperature. Insure that the doors have been allowed to equalize to stable moisture content.
2. Storage - Doors should always be stored flat and in a clean dry surrounding with spacing to allow for proper ventilation. Doors should not be stored directly on concrete or leaned against walls.
3. Preparation - Doors should not be considered ready for painting when initially received. Prior to painting, remove all handling marks, raised grain, and other undesirable blemishes by completely block sanding all surfaces with 180-220 grit sand paper or fine sanding sponges and spot prime as needed. Be sure not to sand through the factory primer.
4. Seal Door - All exposed surfaces must be sealed, including the top and bottom rails.
5. Between Coats - Insure that the door surfaces being painted are satisfactory in both smoothness and color before applying the next coat. Sand if necessary and be sure that each coat is hard and dry before applying the next coat.
6. Paint Selection - On factory primed doors, a waterborne all acrylic latex finish is most compatible with the primers used and is highly recommended. Always obtain and follow paint manufacturers recommendations. Never attempt to paint in high moisture conditions, for the paint will not dry quickly enough and will penetrate into the door and can cause expansion and surface irregularities such as fiber raise.
7. Exterior Application - When painting exterior doors (Infinity only), two coats of high quality exterior sealer or primer must be used. Top and bottom rails, edges, faces, hardware cutouts, light and louver cutouts must be sealed prior to finish painting. This must be done as soon as the doors arrive at the job site. To prevent warping, avoid dark colors and have adequate overhang to protect the doors from the elements. Infinity doors must be ordered with exterior sealant applied at factory or warranty will be voided.
8. Painting - Apply a minimum of two coats of high-grade latex or enamel appropriate for the application to all six sides. During paint application process doors should be stood straight up or hanging. Do not lean doors or lay doors down without equal support throughout the door to avoid warpage. Insure that the environment that the doors are painted in is dry and at a temperature recommended by paint manufacturer.
9. Test Door - Always only paint ONE door to assure quality first before continuing on. ABS-Mfg must be contacted immediately if any quality issues are noticed.

Maintenance:

1. Most finishes on exterior doors deteriorate relatively quickly. Inspect the condition of exterior finishes at least once a year and refinish as often as needed to maintain the protective integrity of the finish.
2. Insure that the doors continue to swing freely and that all hardware remains functional.

Installation:

1. The utility or structural strength of the doors must not be impaired in fitting to the opening, in applying hardware, in preparing for lites, louvers, plant-ons or any other detailing.
2. Use two hinges for door up to 60" in height, three hinges for doors up to 90" in height and an additional hinge for every additional 30" of door height or portion there of. Use heavy weight hinges on doors over 175 pounds. For special 90 minute rated doors special hinge applications apply due to excessive door weight.
3. Clearance between door edges and door frame should be a minimum of 1/16" on hinge edge. For latch edge and top rail the clearance should be 1/8".
4. All hardware locations, preparations for hardware and methods of hardware attachment must be appropriate for the specific door construction. Templates for specific hardware preparation are available from hardware manufacturers or their distributors.
5. When lite or louver cutouts are made for exterior doors, they must be protected in order to prevent water from entering the door core. Metal flashing on cutouts is required.
6. Pilot holes must be drilled for all screws that act as hardware attachments. Threaded to head screws, are preferable for fastening hardware to non rated doors and are required on all fire rated doors.
7. In fitting for height, do not trim top or bottom edge more than 3/4" unless accommodated by addition blocking. Never trim the top edge of a fire rated door.
8. Doors and door frames must be installed plumb, square and level.
9. When installed in exterior applications, doors must be properly sealed and adequately protected from the elements. Flashing should be applied at head, jambs and seal.
10. For installation of any fire rated door see "Fire Door Installation - see #12 below".
11. **Radius jamb installation:**
    - 11.1 To insure a proper installation make sure framing is square and plum. Before installing drywall, install MDF Radius Jamb Blocks (supplied with radius jamb product.
    - 11.2 Install drywall over opening. When installing drywall, using screws rather than nail into the Jamb Block is suggested. Trim drywall to radius opening.
    - 11.3 Install pre-hung radius door unit. Shim unit starting from the hinge side working around the door providing proper reveal. Installation directly against wall studs is strongly discouraged. Make sure jamb is plumb and the reveals between door and jamb are uniform and even. Note: For large or heavy doors you may need to replace the two hinge screws that are closest to the jamb stop with 2-1/2" to 3-1/2" screws that go through the shims and bite into the wall stud.
    - 11.4 Your Radius Jamb System is shipped with the stop tacked into place. Adjust jamb stop if needed and finish nail. Install decorative casing around jamb providing an even reveal between casing and jamb edge.
12. **Fire door installation:**
    NFPA 80, Fire doors and Windows, 1995 Edition, requires that all fire doors and frames be prepared under an inspection service.

    - 12.1 All components of an opening must have a certification label or certification mark to identify as a fire rated component. This identification MUST be applied at the point of manufacture or at an authorized machining distributor. FIELD LABELING OF ANY COMPONENT BY ANYONE OTHER THAN THE INSPECTION AGENCY SHALL VOID THE LABEL.

    - 12.2 The lowest rating of any component determines the rating for the total assembly. (I.e. if a 1 hour door is installed in a 20 minute frame, the maximum rating for the total assembly would be 20 minutes.)

    - 12.3 The clearance between the door and the frame and between meeting edges of doors swinging in pairs shall not exceed 1/8 inch. The clearance under the bottom of the door shall be as follows. Any trimming for height may be done on the bottom rail only (per NFPA 80, maximum trim of 3/4" - 19.0mm allowed on site.
      - 12.3.1 The clearance between the bottom of the door and a raised noncombustible sill shall not exceed 3/8".
      - 12.3.2 Where there is no sill, the clearance between the bottom of the door and the floor shall not exceed 3/4".
      - 12.3.3 The clearance between the bottom of the door and the rigid floor tile shall not exceed 5/8".
      - 12.3.4 The clearance between the bottom of the door and the nominal surface of floor covering shall not exceed 1/2".

12.4 Job site modification is restricted to the following.
- 12.4.1 Function holes for mortise locks, and mounting holes for hardware not to exceed 1" in diameter.
- 12.4.2 Holes for labeled viewers.
- 12.4.3 Protection plates and preparation of surface mounted hardware.
- 12.4.4 **A maximum of 3/4" undercutting of BOOK HEIGHT on particle board and mineral core doors.**
- 12.4.5 Pilot holes MUST be drilled for all screw applications.

12.5 Fire doors, with wood, particleboard, or mineral core are manufactured with the same size top and bottom rails, so that either end of the door can be the top. If there is an exception, the rails will be identified, and the top of the door must not be trimmed.

12.6 Positive pressure assemblies require the following.
- 12.6.1 To qualify for smoke and draft assemblies (PER UBC STD 7-2 1997) the doors must have the secondary "S" label and be installed with listed gasketing that meets (UBC STD 7-2 1997 Part 2) for 20 Minute only.
- 12.6.2 Approved intumescent smoke seals must be applied to the sides and top of the frame, and to the meeting edge of the inactive leaf of doors hung in pairs for Category B. When Category A doors are used, intumescent gasketing is not required.
- 12.6.3 See installation instructions provided with the approved intumescent smoke seals, which are used.

12.7 Latch sets must have a minimum throw of 1/2" NFPA 80 Table 2-8.2.3 states that the latch throw for pairs must be 3/4". The minimum latch throw is stated on the certification label.

12.8 Hinges to be installed per NFPA 80 Table 2-8.1.1. Two hinges are required for a 60" high door and one additional hinge is required for each additional 30" or fraction thereof. The size and thickness of the hinges are covered in the table.

12.9 Closers attached to mineral composite or particleboard core doors usually must be through bolted. An exception to this would be when the doors have interior blocking that would permit the closures to be attached with screws.

12.10 When vision lights are installed in a fire door, the cutout must be done at the manufacturing facility or machining facility. Cutting the door for lights in the field is not allowed unless the preparation is performed under an inspection and a labeling program. Only certified fire rated glass, which is installed in approved frame shall be used. Only glazing labeled for fire may be used, and must be installed in accordance with their individual listing.

12.11 Fire doors equipped with automatic louvers shall be used only for protecting openings in required enclosures when the opening is not in a means of egress or otherwise located so that products of combustion flowing through the opening could jeopardize the use of exits prior to the operation of the louver. 20 minute fire rated doors are not permitted to have louvers.

12.12 Wrap around steel edges with an astragal must be applied to meeting edges of pairs, unless the certification label specifically states that they are not needed. 20 minute doors can usually be installed in pairs with metal steel meeting edges without an astragal. Steel meeting edges should be 18 or 20 gauge, with a minimum lap of 1". Attachment should be with 3/4" No. 8 screws, 12" on center. Mortise edge guards are not allowed unless included in the individual listing. When intumescent meeting edeges are used, metal edges are not required.

12.13 Certification labels are attached at the point of manufacturer or under an inspection service and MUST NOT be removed or replaced except by authorized representatives of the inspection agency. Labels will be applied on the hinge stile at eye level.

12.14 Intumescent Layered Core 45, 60 & 90 fire doors use requires the following additions and exclusions of above sections:
- 12.14.1 **Intumescent core fire doors MUST be manufactured to net size, no undercutting is allowed. This exception modifies12.4.4 above.**
- 12.14.2 It is mandatory that hinges be installed per these instructions. 6/8 and 7/0 in height must be installed with three minimum and doors over 7/0 in height must have four minimum. Hinges must be 4-1/2" x 4-1/2" heavy weight, .180 depth, and 2" x #12 wood screws used. All 45, 60 & 90 minute Intumescent layered core doors will have hinge screw pilot holes drilled at the factory.
- 12.14.3 Millennium 45, 60 & 90 minute (Intumescent layered core) doors are heavy. Please take the proper precautions when installing these doors. Extra help and care should be given due to the weight of the door.