

## **PLASTIC LAMINATE LABORATORY ARCHITECTURAL SPECIFICATION**

### **CONSTRUCTION**

#### **1. A. GENERAL**

- 1.A.1.** The intent of this specification is to set forth construction and design standards that will result in an installation of modular cabinetry requiring FLUSH OVERLAY CONSTRUCTION.
- 1.A.2.** Materials used shall meet or exceed these minimum standards specified.

#### **1.B MATERIALS**

- 1.B.1.** Panels – All cabinets are to be constructed of ¾” thick x 45 pound density particle board. Panels exposed to view, such as finished ends and door and drawer fronts are to be factory laminated with a 1/32” high pressure laminate overlay on both sides. Panels not subject to view are to be melamine overlay both sides. All panels, exposed or not, are to be balanced laminated construction.
- 1.B.2.** Lumber – All lumber used in the construction of cabinets is to be hardwood free and clear of imperfections and kiln dried to a moisture content not exceeding 6%.
- 1.B.3.** PVC Edging – black PVC Edgeband shall be factory applied to exposed edges using hot melt adhesive process.
- 1.B.4.** Hardboard – Hardboard sheets are ¼” thick, as called for, composed of wood fibers and resin binder molded under high pressure to a tensile strength of 3500 p.s.i. and a shear strength of 4500 p.s.i.
- 1.B.5.** Glass – Unless otherwise specified, glass panels are of best quality, double strength, 1/8” thickness for framed glass doors. Frameless glass sliding doors to be ¼” plate glass, all edges ground.

#### **1.C HARDWARE**

- 1.C.1.** In general, hardware and trim shall be of the best quality available for the use intended. All exterior hardware shall be uniform in finish appearance, satin black finish or as specified herein.
- 1.C.2.** Drawer and door pulls shall be full length “F” shape rigid extruded PVC. Floor case hinged door pulls shall be 5/16” x 4” black bail type, held in place with screws on 4” centers.
- 1.C.3.** Hinges shall be concealed type with between 165 and 170 degrees swing, self closing, nickel plated. Hinge to have three dimensional independent adjustability.

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**1.C.4.** Locks shall be applied to doors and drawers on all items of equipment where specified.

Locks shall be dead bolt or cam type with disc tumblers.

Locks shall be furnished in a chrome plate finish with two (2) solid brass keys to each lock.

**1.C.5.** Magnetic catches shall be 2 heavy duty 14 pound pull, double magnet type, adjustable, for tall cabinet doors. One roller catch shall be used for each base and wall cabinet door, when other than concealed hinges are used.

**1.C.6.** Elbow catches and strike plates shall be used on left hand doors of double door base and wall cabinets when locked and shall be of aluminum.

**1.C.7.** Pull chain and dead bolt shall be used on left hand doors of double door floor cases when locked.

**1.C.8.** Drawer slides shall be heavy duty mechanical precision ball bearing slides equipped with 15/16" diameter self lubricating nylon rollers and shall have a load rating of 75 pounds per set. Slides shall have automatic out stops and shall permit the easy removal of drawers without The use of tools or devices. Slides shall not be an integral part of the drawer side. Drawer slides for file drawers shall be full extension, and have a load rating of 100 pounds per set. All slides shall have a clear chromate zinc plated finish. Epoxy coated slides supplied when specified.

**1.C.9.** Shelves shall be adjustable on 1 ¼" centers on plastic coated steel clips. Shelves over 4 feet shall be supported by a full depth center bracket.

### **1.D BASE CABINETS**

**1.D.1.** All cabinets shall be self supporting modular units to permit future changes and efficient handling.

**1.D.2.** Cabinet joints shall be blind rabbet and dado joinery and shall be glued, screwed and wedged together in pressurized squaring clamps.

**1.D.3.** Cabinet ends shall be constructed of ¾" panels blind dados full depth to receive the top members and cabinet bottom.

**1.D.4.** Exposed ends are to be factory laminated on both surfaces with a high pressure plastic laminate. Front edges of all end panels are to be laminated with a black PVC edgeband.

**1.D.5.** Unexposed ends are melamine overlay both sides.

**1.D.6.** Base cabinets shall have integral toespace 4-1/4" x 2-1/2" deep with toe rail set tight against underside of cabinet bottom rail, glued and secured to ends.

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- 1.D.7.** Backs shall be constructed of a two piece, sway resistant frame of  $\frac{3}{4}$ " panel, top member 9-1/2" wide and bottom member 6" wide. Removable backs of cupboard units shall be  $\frac{1}{4}$ " hardboard and held to the back frame with screws. Finish interior backs, where required, shall be  $\frac{1}{4}$ " hardboard with vinyl overlay, and fastened with screws. Where required, finished cabinet exterior backs shall be a  $\frac{3}{4}$ " high pressure laminated panel rabbeted into the cabinet ends.
- 1.D.8.** Top members and bottom of  $\frac{3}{4}$ " particle-board with melamine overlay is blind rabbeted in the cabinet ends for the full depth of the panels, glued and screwed.
- 1.D.9.** Drawer box front, back and sides of 9 ply Baltic birch  $\frac{1}{2}$ " thick with top edges eased. Sides shall be attached to front and back by means of dove-tail joints. Drawer fronts, back and sides to be grooved for a  $\frac{1}{4}$ " thick bottom of white finished non-porous materials. Drawers shall have applied, removable fronts constructed of  $\frac{3}{4}$ " thick oak plywood. Fronts shall be edged in oak edgeband.
- 1.D.10.** When locks are called for and are keyed differently, security panels are required of  $\frac{3}{4}$ " polyester coated panelboard rabbeted into cabinet ends.
- 1.D.11.** Doors shall be  $\frac{3}{4}$ " high pressure factory laminated plastic finished with black PVC edging.
- 1.D.12.** Cupboard shelves shall be  $\frac{3}{4}$ " melamine panels, full width and full depth of cabinet. Shelf shall be adjustable on 1  $\frac{1}{4}$ " centers, and have a finished front edge of black PVC.
- 1.D.13.** Pullout shelves shall be  $\frac{3}{4}$ " melamine panel. All exposed edges shall have a black PVC edgebanding. Pullout shelves shall be mounted on side runners.

### **1.E. WALL CABINETS**

- 1.E.1.** Wall cabinets shall have all exposed surfaces constructed of  $\frac{3}{4}$ " panels similar to base cabinets. Ends shall be blind dadoed to receive top and bottom panels and rabbeted for backs.
- 1.E.2.** Tops and bottoms shall be constructed of a 1" thick melamine panel. The front edge is finished with black PVC. Tops shall be blind rabbeted and glued and screwed into cabinet ends.
- 1.E.3.** Cabinet backs shall be  $\frac{1}{4}$ " hardboard set in rabbets in cabinet ends, glued and secured to ends, top and bottom with fasteners and further reinforced with glue blocks. Backs in cabinets with glazed doors or with doors omitted shall be  $\frac{1}{4}$ " hardboard with a vinyl overlay. Backs shall be set in  $\frac{7}{8}$ " to permit scribing to wall.
- 1.E.4.** Wall cabinets may have hinged or sliding doors or may be open. Hinged doors are  $\frac{3}{4}$ " high pressure laminate panel or glass with frame of 3" x  $\frac{3}{4}$ " solid hardwood using glued dowel construction. Glazed framed doors will be painted or stained to match color or wood grain laminate as selected.

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- 1.E.5.** Sliding doors are  $\frac{3}{4}$ " high pressure laminate panel or glass as described for hinged doors. Two single wheel adjustable side mount carriers shall be attached to the back of each door. Carriers will ride on extruded aluminum track finished black. Doors shall be separated by a nylon floor guide.
- 1.E.6.** Frameless plate glass sliding doors to be nominal  $\frac{1}{4}$ " thick with all edges ground smooth. Glass to be set into an "H" section of aluminum track with friction type of glazing strip. "H" sections to have two nylon rollers which will ride on bottom track assembly for effortless and noiseless sliding.
- 1.E.7.** Adjustable shelves shall be provided in standard depths. Two shelves in cabinets 30" high. Shelves shall be 1" melamine panel with black PVC edgebanding.

### **1.F. TALL STORAGE CABINETS**

- 1.F.1.** Shall be of individual, modular construction to permit future changes and efficient handling.
- 1.F.2.** Cabinet shall have all exposed surfaces constructed of  $\frac{3}{4}$ " panel similar to wall and base cabinets. Ends shall be blind dadoed to receive top and bottom panels and rabbeted for backs. Ends shall be finished as specified for base cabinets.
- 1.F.3.** Cabinets shall have all exposed surfaces constructed of  $\frac{3}{4}$ " panel similar to wall and base cabinets. Ends shall be blind dadoed to receive top and bottom panels and rabbeted for backs. Ends shall be finished as specified for base cabinets.
- 1.F.4.** Cabinet bottoms shall be  $\frac{3}{4}$ " thick melamine panel, blind rabbeted into the cabinet ends, glued, screwed and reinforced with glue blocks.
- 1.F.5.** Tops shall be constructed of a 1" thick melamine panel. The front edge is finished with a black PVC edge. Tops shall be blind rabbeted and glued and screwed into cabinet ends.
- 1.F.6.** Cabinet backs shall be  $\frac{1}{4}$ " hardboard set in rabbets in cabinet ends, glued and secured to ends, top and bottom with fasteners and shall be further reinforced with glue blocks. Backs in cabinets with glazed doors or with doors omitted shall be  $\frac{1}{4}$ " hardboard finished with a vinyl overlay. Backs shall be set in  $\frac{7}{8}$ " to permit scribbling to walls.
- 1.F.7.** Doors, either sliding or hinged are to be  $\frac{3}{4}$ " thick high pressure plastic laminate. Framed glazed doors, either sliding or hinged are  $\frac{3}{4}$ " x 4" hardwood, painted or stained to match color or wood grain laminate as selected.
- 1.F.8.** Five adjustable shelves shall be provided in standard depths. Each shelf shall be supported as specified under Hardware. Shelves shall be 1" melamine panel and finished with black PVC edgebanding on front edge.

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### **1.G TABLES**

- 1.G.1.** Table frames, housings and rails shall be constructed of 1" poplar plywood laminated with a high pressure plastic laminate overlay with apron rails secured by steel angle brace dadoed into position and secured by screws. Rails shall be butt jointed to table legs and held tight by a hanger bolt through brace into each leg.
- 1.G.2.** Cross rails shall be dadoed and glued into front and back apron rails not more than 48" apart. Drawer support rails shall be provided for all drawer openings.
- 1.G.3.** Table legs are to be solid hardwood of the type specified and are to be not less than 2-1/4" square. When specified legs shall be joined with 2- 1/4" x 7/8" thick stretchers which are butt jointed into legs. Stringers shall be used between pairs of legs with more than 60" apart and shall be dadoed into stretchers and fastened by a 1/4" x 3-1/2" bolt through the leg into a metal insert in the stretcher. Legs are equipped with adjustable levelers and black rubber shoes.
- 1.G.4.** Welded-frame tables are fabricated from 1-1/4" square, 16 gauge steel tube. All joints electrically welded and ground smooth wherever exposed. Frames are cleaned and sprayed with one coat of corrosion-resistant primer on all exposed surfaces and oven dried. Final finish of one coat flat black polyester is applied and oven dried.

### **1.H. MISCELLANEOUS**

- 1.H.1.** Fillers shall be made from 3/8" or 3/4" panels with a high pressure plastic laminate surface. Overlay fillers for end of bench assemblies shall be 3/8. All face fillers shall be 3/4" and installed flush with cabinet end panel leading edge.
- 1.H.2.** Knee space panels shall be made from 3/4" thick panels with a high pressure plastic laminate surface.