

## LOC Laboratory Polypropylene Casework SECTION 12350

### Part 1 General

#### 1.1 References

- A. The following is a list of standards which may be referenced in this section
  - 1. Americans with Disabilities Act
  - 2. American national Standards Institute (ANSI)
  - 3. American Society of Heating, Refrigeration, and Air-Conditioning Engineers, Inc. (ASHRAE)
  - 4. American Society for Testing and Materials (ASTM)
  - 5. National Electrical Manufacturer's Association (NEMA)
  - 6. National Institute of Standards and Technology (NISTA)
  - 7. Scientific Equipment and Furniture Association (SEFA)
  - 8. National Association of Manufacturers; [www.nam.org](http://www.nam.org)
  - 9. National Federation of Independent Business; [www.nfib.com](http://www.nfib.com)

#### 1.2 Summary

- A. The scope of work includes the following:
  - 1. Casework (Base, Floor, Wall Case)
  - 2. Storage, carts, bench units
  - 3. Fume hoods
  - 4. Shelving, sinks, counters, accessories
- B. Related section Includes the following
  - 1. Division 6 Section "Rough Carpentry" for wood blocking for anchoring casework to walls.
  - 2. Division 9 Section "Gypsum Board Assemblies" for reinforcements in metal-framed gypsum board partitions for anchoring laboratory casework.
  - 3. Division 9 Section "Resilient Wall Base and Accessories" for resilient base applied to toe base of floor casework.
  - 4. Division 15 and 16 Sections for installing service fitting specified in this Section.

#### 1.3 Submittal

- A. Shop Drawings: Completely detailed describe and illustrate features, materials, fabrication, and layout with rough-in details for plumbing, electrical, ventilation connections.
- B. Show required field measurements, provide details and dimensions.
- C. Provide installation instructions, operations and maintenance information.
- D. Hardware samples.
- E. Quality Assurance Statement and printed warranty.
- F. References and minimum of 5 years experience.
- G. Delivery, Storage, Handling.

#### 1.4 Materials

**Polypropylene:** Stress relieved polypropylene, 3/16", 3/8", 1/2" thick material, with hot air welded joints.

- A. Fully seam welded reinforced polypropylene for base, wall, and tall cabinets.
- B. Polypropylene hardware hinges and pulls attached with polypropylene screws.
- C. Stress relieved, standard white, option for black.

- D. Minimum of two hinges for doors.
- E. Two pulls for drawers 24" and wider.
- F. Door catch: 20 mil polyethylene coated magnets imbedded into the door/frame at center of each door. Provide a minimum pull of 4 pounds.
- G. Adjustment clips PVC to adjust shelf position ½ inch increments.
- H. Seismic restraining lip as noted on details will be ½" and on all open shelving.  
NOTE: Restraining Lip is not standard. Quoted as option when needed.
- I. Guides, smooth, precise, with a minimal side-to-side motion when drawer is extended full depth.
- J. Trim will be secure and rigid and match.
- K. Transparent Doors: Clear tempered float glass, conforming to ASTM C1048, Kind FT, Condition A. Type I, Class 1, glazing quality, 6mm (3/16") minimum thickness.
- L. Adhesives and caulking to be water-resistant.
- M. Supports for piping chase unistrut or polypropylene.

### Construction General

Each casework unit has a completely welded shell assembly (case) which is rigid and self-supporting for use interchangeably in a group of cases or for single unit use. Each unit is complete and can be relocated at any time without requiring field application of finished ends or other such parts. Units have flush front construction with intersection of vertical and horizontal case members, such as end panels, in same plane without overlap. Face joints shall provide a continuous flat plane. A uniform clearance around door and drawers are provided.

- A. Materials Polypropylene: Stress relieved polypropylene, ¼", 3/8", ½" thick material, with hot air welded joints.
- B. Base Unit
  1. Intermediate rails are provided between door and drawers. If required between drawers indicate and this adds to cost and must be noted on the drawings.
  2. Case bottom is a pan type and will be sealed to sides to contain liquids and to provide ease of cleaning. Note: Drawer Units are an exception to this design.
  3. Toe space rails shall extend up and forward to engage bottom rail to form a smooth surfaced fully enclosed toe space, minimum 3 inches deep and 4 inches high. When base is omitted, this space shall be fully enclosed.
  4. A front and back flange shall be furnished on the top of each cabinet for fastening the countertop. Note: All fume base cabinets will have 4-sided flange.
  5. Removable back panel provides access to utility chase through either access panels in integral fixed backs or back panels removable from the interior of an installed case. Note: Drawer units are an exception to this specification.
  6. Integral back with open area for plumbing will be provided on sink base units.
  7. Knee space back panels are same finish as cabinets and remove easily.
  8. Optional with added cost is leg levelers if indicated, and will be of 3/4" FRP ATR (all thread rod). The levelers will be located in all (4) corners of the cabinets indicated. An all polypropylene block 1-1/2" thick and threaded through (FPT) is welded in each corner to allow adjustment of leg leveler and to provide addition reinforcement.
- C. Doors: Doors consist of solid one-piece construction. Corners and edges to be ground smooth to prevent exposure of sharp edges. Note: Doors are easily removed. No welds on doors unless option sliding latch is required.

- D. Shelves are adjustable and shall be constructed with a design load of 50lbs per square foot. Shelves adjustable on 1/2" on centers in base units and wall case and storage units are 1" on center.
- E. Wall Upper Cabinets
  - 1. Shell Construction is 1/2" polypropylene material is completely welded.
  - 2. Wall cabinets are self-supporting.
  - 3. Doors consist of solid one-piece construction. Welds on corners and edges (if sliding latch is used) to be ground smooth to prevent exposure of sharp edges. Available hinged, or sliding and materials of Polypropylene, Lexan, or Glass. Doors are easily removed.
  - 4. Shelves are adjustable and are constructed with a design load of 50 pounds per square foot capable load. Shelves shall be adjustable on 1" centers.
- F. Polypropylene Casework Hardware
  - 1. The drawer and door pulls can be polypropylene, PVC, or ABS plastic.
  - 2. Pulls can be recessed (not attached to the top edge of drawers or doors) or wire pulls (optional), which offer a comfortable hand grip with a thru bolted to door or drawer with non-metal fasteners from back face. Pulls will meet State and Federal Handicapped Accessibility Regulations.
  - 3. Hinges will be polypropylene, "Inline" lift off style.
  - 4. Each hinge consists of two (2) halves with a centering pin.
  - 5. The doors have a top and bottom knuckle that is machined with a radius from the door material for strength.
  - 6. The front support frame has a top and bottom knuckle welded in place that is offset from the door knuckles. One pair of hinges will be provided for doors less than 36" in height and 1-1/2 pair for doors over 36" in height.
- G. Door Catch is a standard door catches, but is encapsulated magnets installed in the door and doorframe. Door catches are capable of a 4 lbs magnetic pull same as base catches.
- H. Latches (an option), is non-metallic with non-metallic strike plates. Latch moves horizontally, 3/16" to lock door.
- I. Drawer Guides are same materials as cabinets and provide a quiet smooth operation. Two guides or rails are machined to fit drawer bottom edges, to provide additional strength and one piece construction. Bottom drawer edge is oversized to fit guides in place of attaching a rail to drawer by means of mechanical attachment or welding to side of drawer.
- J. Work Surfaces
- K. Carts
- L. Bench
- M. Sinks and accessories
- N. Accessories: Reagent Shelves, Lattice, rod and crossbar.
- O. Pegboards
- P. Sloped tops
- Q. Molding
- R. Special bases