

DIVISION 12 - FURNISHINGS

(LINK TO UNIVERSAL DESIGN IN PROGRAM INFO./REQUIREMENTS)

12000 - GENERAL

1. Division 12 includes specifications for all items of furnishings such as window treatment, fabrics, furniture, rugs, seating and similar items.
2. The A/E shall develop specific standards for furnishings in cooperation with the owner's representative as required for each project.
3. Consider user requirements and concerns for ergonomics, durability, serviceability and maintainability, as well as appearance when selecting and specifying furnishings. Consult the ergonomic requirements and established contracts for the proper application.

12345 - LABORATORY CASEWORK

1. Governing Regulations for Hazardous Chemical Storage Cabinets

- A. Minnesota Pollution Control Agency Regulations MR Chapter 7045
 - B. Minnesota Uniform Building Code MR Chapter 1300
 - C. Minnesota Uniform Fire Code MR Chapter 7510
 - D. National Fire Protection Association (NFPA) 45 or NFPA 99
 - E. Occupational Exposure to Hazardous Chemicals in Laboratories 29 CFR 1910.1450
2. Metal laboratory casework and accessories shall comply with Appendix L - Laboratories Where Hazardous Chemicals Are Present as required for complete installation. The casework shall be manufactured, delivered and installed by and under the direct supervision of a single manufacturer to ensure a single source of responsibility. All related work is subject to compliance with university standards. Fisher-Hamilton and Kewaunee are acceptable manufacturers.
 3. Metal laboratory casework countertops shall be either 1-inch epoxy resin or stainless steel.
 4. Provide at least 2 lineal feet of base cabinet storage for each lineal foot of fume hood width. Storage under a fume hood may account for half of the required storage. Ventilate the chemical storage cabinets located under a fume hood. Chemical resistant storage trays shall be furnished to contain a spill of free liquid in the storage unit. Sufficient protected storage must be provided to accommodate new chemicals and packaged waste. Without adequate storage space, containers of waste chemicals that are stacked on the floor may

be subject to breakage. Contact the Department of Environmental Health and Safety (DEHS) to determine adequate storage for the intended use.

5. Flammable Liquid Storage Cabinets

5.1. Flammable storage cabinet top, bottom, sides and doors shall not be less than 18-gauge steel, double-walled construction with 1-1/2 inches of space for air between the walls. Cabinets also may be constructed from 1-inch exterior grade plywood with rabbet joints fastened in two directions by wood screws and painted with intumescent paint. Cabinet doors shall be equipped with a three-point latch system. A liquid tight pan that can hold 2 inches of liquid shall be provided.

5.2. When installed under a fume hood, a cabinet shall be ventilated at a rate of at least 5 cfm to maintain air pressure by a duct penetrating behind the baffle to at least 1 inch above the work surface. Make up air supply for the cabinet shall be taken from the pipe space behind the cabinet. Supply vents shall not be placed on the front or side of the cabinet to avoid drawing hot gases from the laboratory fire into the cabinet. Flame arrestors shall be provided on all flammable storage cabinet vents (inlets and outlets).

5.3. When the cabinet is free standing, it may not be necessary to ventilate it.

5.4. The front of the storage cabinet shall be labeled "FLAMMABLE-KEEP FIRE AWAY" with at least 1-inch high, 1/4-inch stroke red letters against a contrasting background.

6. Corrosive Chemical Storage Cabinets

6.1. Corrosive chemical storage base cabinets shall be constructed from a complete corrosion-resistant liner. The cabinet must be ventilated at the rate of at least five cfm.

6.2. When installed under a fume hood, vent pipes shall extend above the work surface and behind the fume baffle to at least 1 inch above the work surface. Flame arrestors are not required. Relief air vents may be provided in the cabinet door.

6.3. The cabinet shall be provided with a removable, corrosion-resistant, liquid-tight pan that can hold 2 inches of liquid. Cabinets shall be labeled "ACID STORAGE" with at least 1-inch high, 1/4-inch stroke letters.

7. Gas Cabinets: Gas cabinets shall be constructed on not less than 12-gauge steel. To access and view controls, cabinets may be provided with self-closing, limited access ports that also may have a safety glass window. Gas cabinets shall be exhausted. Cabinets may be ducted to a fume hood or general exhaust. If provided with an access port, the average face velocity across the open port must be at least 200 fpm.

12500 - SEATING

1. Chairs shall be chosen from those that the university has approved as having adequate ergonomic features. Contact University Purchasing for more information. Also refer to the DEHS Web site for more information on ergonomic issues: www.dehs.umn.edu/ergo.
2. Knee hole space for computer workstations in laboratories shall not have drawers.

End of Division 12 - Furnishings
University of Minnesota Facilities Management
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