



Coffee Break Training - Fire Protection Series

Hazardous Materials: Flammable Liquid Storage Cabinets

No. FP-2011-16 April 19, 2011

Learning Objective: The student shall be able to list the construction requirements for flammable liquid cabinets.

There are a variety of circumstances in the model codes where flammable and combustible liquid containers must be kept within approved flammable liquid storage cabinets. These cabinets must meet specific construction requirements to satisfy the codes.

One option is to purchase a flammable liquid cabinet meeting the listing requirements of Underwriters Laboratories (UL) 1275, *Flammable Liquid Storage Cabinets*, but cabinets do not have to meet this standard as long as they are constructed in accordance with the following specifications.

Unlisted metal cabinets shall be constructed in the following manner:

- The bottom, top, and sides of cabinet shall be at least 0.044 inch (1.12 mm) No. 18 gauge sheet steel.
- The cabinet and door must be double-walled with a 1- 1/2-inch (38 mm) airspace.
- Joints shall be riveted, welded, or made tight by some equally effective means.

Unlisted wooden cabinets shall be constructed in the following manner:

- Bottom, top, and sides of cabinet shall be constructed of exterior grade plywood at least 1 inch (25 mm) thick.
- Joints shall be rabbeted and fastened in two directions with wood screws.
- When more than one door is used, they should have a rabbeted overlap of not less than 1 inch (25 mm).
- Cabinets must be painted with an intumescent-type paint.

All flammable liquid cabinets must have

- doors that are well-fitted, self-closing, and have a three-point latch;
- a sill raised at least 2 inches (51 mm) above the cabinet bottom to retain spilled liquid within the cabinet; and
- red letters on a contrasting background reading "FLAMMABLE—KEEP FIRE AWAY."

Cabinets are not required to be grounded. Many manufacturers provide a grounding screw on their cabinets as a convenience to the user. The user can connect this screw to a building ground and use the cabinet-mounted ground point as needed to ground individual containers from which liquids are dispensed.

Cabinets are not required to have an exhaust ventilation system, although most manufactured cabinets have plugged fittings that can be used for such purpose. Exhaust ventilation should be provided only when warranted by the materials in the cabinet, for example, for particularly toxic or noxious materials. If provided, the manufacturer's instructions should be followed. Typically, this will involve small diameter steel duct or pipe leading directly and by the shortest route to the exterior of the building. Exhaust must be taken from the bottom of the cabinet.



This flammable liquid cabinet is designed and built in accordance with Underwriters Laboratories (UL) 1275, *Flammable Liquid Storage Cabinets*.



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