

Regulatory Manufacturing Specifications for Wooden Flammable Liquid Storage Cabinets

Flammable liquid storage cabinets are required to meet the specifications set up by the National Fire Protection Association (NFPA #30) and OSHA (29CFR1910.16). Additionally, some states and/or local agencies may require that the cabinets also follow the specifications under the Uniform Fire Code (UFC 79.202) which requires flammable storage cabinets to have self-closing doors.

- Prior to purchasing any chemical storage cabinet, familiarize yourself with the local and state codes.
- With any code, make sure the chemical you are intending to store is compatible with the other stored chemicals.
- Corrosive liquids are not usually covered under the same specifications as flammable and combustible materials.
- Corrosive chemicals should be stored separately from flammable and combustible chemicals.
- Make sure the chemical that you are intending to store is compatible with the material of the cabinet.
- Carefully check to make sure you are required to meet the specifications for self-closing doors. It will add cost to the purchase price of your cabinet.



NFPA #30 4-3.2.2

Wooden cabinets constructed in the following manner are acceptable. The bottom, sides, and top shall be constructed of exterior grade plywood at least 1 inch (2.5 cm) in thickness, which shall not break down or delaminate under fire conditions. All joints shall be rabbeted and shall be fastened in two directions with wood screws. When more than one door is used there shall be a rabbeted overlap of not less than 1 inch (2.5 cm). Doors shall be equipped with a means of latching, and hinges shall be constructed and mounted in such a manner as to not lose their holding capacity when subjected to fire exposure. A raised sill or pan capable of containing a 2-inch (5 cm) depth of liquid shall be provided at the bottom of the cabinet to retain spilled liquid within the cabinet.

OSHA 1910.106 (d) (3) (ii) (b)

Wooden cabinets constructed in the following manner shall be deemed in compliance. The bottom, sides, and top shall be constructed of an approved grade of plywood at least 1 inch in thickness, which shall not break down or delaminate under fire conditions. All joints shall be rabbeted and shall be fastened in two directions with flathead wood screws. When more than one door is used, there shall be a rabbeted overlap of not less than 1 inch. Hinges shall be mounted in such a manner as not to lose their holding capacity due to loosening or burning out of the screws when subjected to the fire test.

Uniform Fire Code 79.202

(c) Storage Cabinets

1. *General.* When other sections require that liquid containers are stored in storage cabinets, such cabinets and storage shall be in accordance with this subsection.

2. *Quantities.* The combined quantity of Class I and Class II liquids in a cabinet shall not exceed 60 gallons, and the total quantities of all liquids shall not exceed 120 gallons.

3. Construction.

A. *Labeling.* Cabinets shall be conspicuously labeled in red letters on contrasting background FLAMMABLE—KEEP FIRE AWAY.

B. *Doors.* Doors shall be well fitted, self-closing and equipped with a latch.

C. *Bottom.* The bottom of the cabinet shall be liquid-tight to a height of at least 2 inches.

D. *Materials (I) General.* Cabinets shall be constructed of wood or metal and approved by the chief. Cabinets shall be listed or constructed in accordance with Section 79.202(c) 3D (ii) or (iii).

(iii) *Wooden cabinets.* Wooden cabinets, including doors, shall be constructed of not less than 1-inch exterior grade plywood. Joints shall be rabbeted and shall be fastened in two directions with wood screws. Door hinges shall be of steel or brass. Cabinets shall be painted with an intumescent-type paint.

Definition of Flammable or Combustible Liquids

- **Class I:** Flammable liquids with a flashpoint below 100 °F (37.8 °C)
- **Class II:** Combustible liquids with a flashpoint above 100 °F (37.8 °C) and below 140 °F (60 °C)
- **Class IIIA:** Combustible liquids with a flashpoint above 140 °F (60 °C) and below 200 °F (93 °C)

NOTE: Before purchasing any chemical storage cabinet, familiarize yourself with all local and state codes from the appropriate agencies having jurisdiction in your area.