

Flammable and Combustible Liquid Storage Cabinets



If you need more than four or five 1-gallon or larger containers, or twelve or more smaller containers, of flammable or combustible liquids, you should have a storage cabinet to organize them. Storage cabinets provide a safe and convenient means to store containers of liquids including those in safety cans.

Construction features for storage cabinets are defined by NFPA 30, Flammable and Combustible Liquids Code. While cabinets can be constructed using NFPA 30, commercially available cabinets are recommended as an easier means of obtaining the protection. Approved and listed cabinets are produced by many different companies. In addition to the labeled cabinets, these same companies make cabinets of similar construction in larger (for 55-gallon drums) and smaller sizes (such as for use in laboratories).

Key features for a good flammable and combustible liquid storage program are:

- Not more than 120 gallons of flammable or combustible liquid may be stored in a single cabinet. Not more than 60 of the 120 gallons may be Class I and II liquids.
- Preferably, doors should be kept closed and latched. Automatic closing doors should be checked for complete closing upon release of the fusible link.
- Liquid storage containers should be kept in the cabinet when not in use.
- Vents on cabinets are not required, but they are often provided. If vents are provided and not used, the vent openings must be sealed with the bungs supplied with the cabinet or with bungs supplied by the manufacturer of the cabinet. If the cabinet is vented, flame arrestors should be provided on the openings. Also, the vents should be extended to a safe location, generally outside the building.
- Each cabinet should be conspicuously labeled "Flammable-Keep Fire Away."
- Only flammable and combustible liquids should be stored in the cabinet. Acids, caustics, and other non-flammable hazardous materials should not be stored in the cabinet.

- Not more than three cabinets may be located in a fire area. However, in an industrial occupancy, additional storage cabinets may be permitted to be located in the same fire area if a minimum separation of 100 ft. is maintained between each group of not more than three cabinets. Also, an industrial occupancy that is protected by an automatic sprinkler system (which is designed properly) may have the number of cabinets in any one single group increased to six.

Definitions:

Flammable or Class I liquids are those having flash points below 100 degrees F and a vapor pressure not exceeding 40 psi at 100 degrees F. Class I liquids are subdivided as follows:

Class IA. Flash point below 73 degrees F and boiling point below 100 degrees F.

Class IB. Flash point below 73 degrees F and boiling point at or above 100 degrees F.

Class IC. Flash point at or above 73 degrees F and below 100 degrees F.

Combustible liquids are those having a flash point at or above 100 degrees F. Combustible liquids are subdivided as follows:

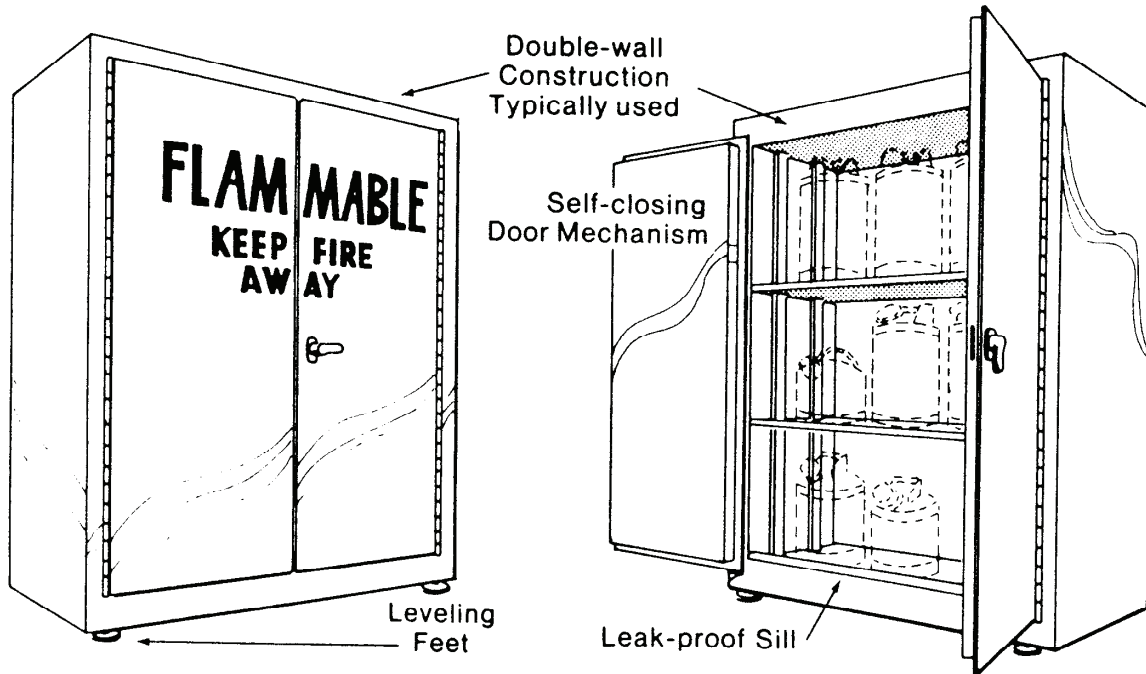
Class II. Flash point at or above 100 degrees F and below 140 degrees F.

Class IIIA. Flash point at or above 140 degrees F and below 200 degrees F.

Class IIIB. Flash point at or above 200 degrees F.

Data Source: NFPA 30, Flammable and Combustible Liquids Code.





Maximum Allowable Size of Containers

Container Type	<u>Flammable Liquids</u>			<u>Combustible Liquids</u>	
	Class IA	Class IB	Class IC	Class II	Class III
Glass	1 pt	1 qt	1 gal	1 gal	5 gal
Metal (other than DOT drums or approved plastic)	1 gal	5 gal	5 gal	5 gal	5 gal
Safety Cans	2 gal	5 gal	5 gal	5 gal	5 gal
Metal Drum (DOT Spec.)	60 gal	60 gal	60 gal	60 gal	60 gal
Polyethylene (DOT Spec. 34, or as authorized by DOT exemption)	1 gal	5 gal	5 gal	60 gal	60 gal

Class IA and IB liquids are permitted in glass containers not exceeding one gallon if liquid purity (such as reagent grade) requires this type storage. Stocks of these flammable liquids should be kept in a cabinet unless being immediately used. This action will minimize spills and breakage.