



Storing of Flammable and Combustible Liquids

What are they?

A flammable or combustible liquid is any chemical volatile enough to create flammable vapors which can ignite if a spark is present. These liquids are subdivided, based on their boiling and flash points, into a hierarchy of hazard classification. All such liquids are required to be labeled, so if the label on the container says "flammable" or "combustible" anywhere on it, then it meets the criteria and must be stored according to the fire code rules.

Treat empty containers the same as partially filled ones; the vapor in an un-rinsed container is as flammable as the liquid was. Put the lid back on and store the container in the same location as you did when it was full

Flammable Chemical Storage

- Do not store more than 10 gallons of flammable chemical outside of a flammable cabinet unless safety cans are used. If safety cans are used, 25 gallons of flammable chemicals may be stored outside of the flammable cabinet.
- Do not store more than **60 gallons** of flammable chemicals in a given flammable cabinet.
- If you have more than 60 gallons, you must have more than one cabinet for storage.
- You may not have more than three flammable liquid storage cabinets in a room.
- You may not have more than the maximum of 120 gallons total of all flammable liquid hazard classes in one room.

Where do I put them?

- Not near an exit. Do not store flammable liquids near exit doorways, stairways, or in a location that would make it difficult to get out of the room in case of a fire.
- On good shelves. Shelving needs to be sturdy, as well as adequately braced and anchored for seismic safety. The shelves also need to be deep enough to comfortably hold what you put on them, and must have a lip or guard to prevent individual containers from being easily displaced.
- Not in a basement. This applies in particular to the most hazardous class of flammable liquids, but is a good rule to follow for all of them.
- Not in a refrigerator, unless it's a special one designed, rated, and approved for storage of flammables. Standard refrigerators can create sparks during normal operation that may ignite accumulated vapors, resulting in explosions. The refrigerator must be clearly marked with the words, "NO FOOD-CHEMICAL STORAGE ONLY".
- In a special cabinet. To meet the requirements of the fire code, a flammable liquid storage cabinet must have:

1. Conspicuous signs on it which read, in large red letters on a contrasting background, FLAMMABLE - KEEP FIRE AWAY.
2. Doors that are well-fitting, self-closing, and equipped with a latch. It's also a very good idea to have a lock hasp fitted to the cabinet for security.
3. A leakproof bottom, and liquid-tight walls to a height of at least two inches up from the bottom of the interior.
4. Approved construction materials and methods. They may be made of either metal or wood, so long as they meet the specifications of the standard.

Type of Liquid	Flash Point	Boiling Point	Examples	Max (gal)
Class I-A	<73	<100	Ethyl ether, acetaldehyde, ethyl mercaptan	30
Class I-B	<73	<100	MEK, gasoline, methanol, toluene, hexane, benzene, acetone, acetonitrile	60
Class I-C	<73	<100	Turpentine, styrene	90
Class II	>100	<140	Stoddard solvent, acetic acid, acetic anhydride, kerosene, diesel	120
Class IIIA	>140	<200	Creosote oil, phenol	330
Class IIIB	>200		Ethylene glycol, epoxy resin	13,200