Flammable Storage Cabinets

Introduction:
Flammable storage cabinets must be utilized for storage of liquids with a flashpoint at or below 199.4 °F (93 °C), which pose a significant fire hazard. Under the Globally Harmonized System, this includes liquids with the hazard codes H224 through H227. Due to the ease at which these liquids can be ignited in air at ambient temperatures, safe handling and storage require the use of appropriate equipment and practices. Flammable storage cabinets are constructed to limit the internal temperature when exposed to fire, preventing liquids inside from becoming additional fire fuel. Cabinets also help to identify, organize, and segregate dangerous liquids, reducing the chances of them being the source of a fire.

Flammable Liquids Storage Requirements
- Limit the amount of flammable liquids outside of a flammable cabinet to what is in-active-use only. Flammable liquids should be returned to the flammable cabinet immediately after use.
- Limits on the amount of flammable liquids outside of a flammable cabinet includes flammable liquid waste.
- No more than 60 gallons of flammable and combustible chemicals can be stored in flammable storage cabinets in any laboratory not protected by an automatic fire suppression/fire sprinkler system.
- In shared lab spaces, consider the amounts of flammable liquids being stored by other groups outside of a flammable cabinet.

Flammable Cabinet Requirements
- Each cabinet must be either UL 1275 rated or FM Class #6050 approved and meets OSHA and NFPA specifications.
- Cabinets must be clearly marked “Flammable Storage” or "Flammable - Keep Fire away".
- It is strongly recommended that the cabinets have self-closing doors.
- The cabinet must be in good condition with no holes and all bungs seated.
- The door to the cabinet must be able to fully close without gaps. Doors that are warped or do not fully close and latch must be repaired or the cabinet must be replaced.
- Please note the maximum capacity for the unit you are purchasing. This value must not be exceeded.
- Account for the maximum amount of flammable liquids that you have at any single time.
- OEHS and WSU Fire Marshall are available for consultation on cabinet types.

Location of Flammable Cabinets
- Do not place flammable storage cabinets in egress routes. These corridors must remain free of obstacles, and in particular should not be used for the storage of flammable materials.

Additional Concerns
- Flammable liquid storage cabinets are not intended for storage of non-flammable chemicals, including oxidizers, highly toxic materials, acids, bases, or compressed gases. Some of these chemicals may dangerously interact with flammable liquids or damage the integrity of a flammable cabinet.
- Flammable corrosives stored in flammable cabinets must be tightly capped and in a secondary container.
- Not all flammable liquids are compatible. Ensure that chemicals are segregated within the cabinet according to reactivity.
- Do not stack flammables stored in cabinets and ensure containers are stored in an upright position.
- Remove combustible materials from these cabinets (i.e. remove all cardboard packaging prior to placing materials in the cabinet).
- If you are sharing storage space, please coordinate your purchases as necessary so that the maximum storage capacity is not exceeded.
Emergency Response & Contacts:

- **WSU Public Safety**: (313) 577-2222, emergency transportation
- **Henry Ford Occupational Health – Harbortown**
  3300 East Jefferson, Suite 100
  Detroit MI 48207
  (313) 656-1618
  Monday – Friday 8:00 AM to 6:30 PM
- **For help outside of health clinic hours**
  **Detroit Receiving Hospital – Emergency Room**: (313) 745-3000
  OR
  **Henry Ford Hospital – Emergency Room**: (313) 916-8742
- **Office of Environmental Health and Safety**: (313) 577-1200, spills or clean-up
- **WSU Fire Marshall**: (313) 577-3110.

References

1. OSHA 29 CFR 1910.106 FLAMMABLE LIQUIDS
2. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 30 FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE.
3. NFPA 1 FIRE CODE
4. NFPA 45 FIRE PROTECTION FOR LABORATORIES USING CHEMICALS