



## **CORRIDOR USE**

### **Introduction**

This corridor use fact sheet is intended to provide basic storage guidance to aid with compliance to local, state and federal fire and safety regulations. Minimizing the storage of materials and equipment in corridors can significantly improve the overall life - safety of the building occupants.

Items in stairwells, blocking exit doors, restricting corridors or blocking fire emergency equipment constitute a serious life - safety hazard and require immediate corrective action.

### **Storing Flammable and Combustible Liquids**

NFPA Standards 30 and 45, Federal OSHA standards and local fire regulations, limit the container size and quantity of flammable and combustible materials stored. Limitations are based on the type of container and the flammability of the material, fire suppression systems, and storage locations in the building.

- Consider the storage requirements of each highly reactive chemical prior to bringing it into the laboratory.
- Consult the MSDSs or other literature in making decisions about storage of highly reactive chemicals.
- Bring into the laboratory only the quantities of materials you will need for your immediate purposes (less than a 3 – 6 months' supply).
- Label, date and inventory all highly reactive materials as soon as received.
- Store highly reactive liquids in trays large enough to hold the contents of the bottles.
- Segregate:
  - Oxidizing agents from reducing agents and combustibles
  - Powerful reducing agents from readily reducible substrates
  - Peroxyphoric compounds from flammables, and
  - Perchloric acid from reducing agents
- Highly toxic chemicals should be stored in unbreakable secondary containers, labeled clearly with chemical composition, know hazards and warnings for handling.



## Corridor Use Guidelines

- Exits, stairwell, hallways and corridors must be free of obstruction. No materials or equipment may be placed, either permanently or temporarily, within the exit route or impede access to emergency equipment, fire extinguishers, fire pull stations, strobes, etc.
- All storage must be arranged so that one side of the corridor is clear and free of any type of storage. Clearance must be continuous from the corridor to the exits, stairwells or emergency exits. (i.e. – all storage is on the right side of the corridor)
- The **minimum** continuous clearance width for a corridor is 44 inches.
- Emergency exit routes must be arranged so that employees will not have to travel toward a high hazard area, unless the path of travel is effectively shielded from the high hazard area by suitable partitions or other physical barriers.
- Exit routes must be kept free of explosive or highly flammable furnishings or other decorations.
- Exits signs must be clearly delineated.
- Exit doors shall swing in the direction of exit travel.
- Any devices that are holding fire doors in an open position or restricting the doors from operating are prohibited (i.e. – wooden wedges)
- All fire doors or smoke partition doors are to be equipped with self-closing mechanisms or automatic release hold-open devices and be maintained in good working order.
- All flammable and combustible liquids must be stored in a NFPA rated flammable storage cabinet and constructed to meet OSHA standard 1910.106(d)(3)(ii)(a).
- **All flammable storage cabinets must be placarded with the name of the owner and also with identification of the cabinet contents.** The principal investigator must complete a hallway storage sign for each cabinet located in the hallway.
- Flammable storage cabinets are **not** intended for the storage of highly toxic materials, acids, bases, compressed gases or pyrophoric chemicals.



## **Additional Information**

### **Fire Area**

The total quantity of flammable and combustible liquids, solids and gases stored in a building are limited by the type and quantity of materials and fire separation areas. A fire area is defined by NFPA 30 as “an area of a building separated from the remainder of the building by construction having a fire resistance of at least 1 hour...”

"In an industrial occupancy, additional flammable liquid cabinets may be located in the same fire area if the additional flammable liquid cabinets, or the group of not more than three (3) cabinets, is separated from the other cabinets or group of cabinets by at least 100 feet (30 m)”.

### **Flammable Liquid Cabinets**

1. Class 1 Flammable liquids **cannot be stored below grade as per the Massachusetts 527 - Board of Fire Prevention Regulations.**
2. No more than 60 gallons of a Class I flammable liquids (flash point below 100°F) or Class II combustible liquids (flash point between 100 to 140°F) may be stored in a flammable-liquids storage cabinet.
3. No more than 120 gallons of a Class III combustible liquid (flash point between 140°F and 200°F) may be stored in a flammable-liquids storage cabinet.
4. Storage cabinets shall be designed and constructed to limit the internal temperature to not more than 325°F when subjected to a 10-minute fire test using the standard time temperature chart set forth in NFPA 251.
5. All flammable-liquids cabinets shall be labeled in conspicuous letters "Flammable - Keep Fire Away."
6. Storage cabinets shall be constructed of at least No. 18 gauge sheet iron and shall be double walled with 1-1/2 inch air space. Joints shall be riveted, welded, or made tight by some equally effective means. The door shall be provided with a three-point lock, and the doorsill shall be raised at least 2 inches above the bottom of the cabinet.
7. All flammable liquid storage cabinets must be grounded. A ground cable of 3/8" copper braid or a 12 gauge copper conductor can be used. The ground must be tested and resistance to ground cannot exceed one megohm. The grounding cable must be connected to a building structural member or an electrical building ground. Due to



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increased use of plastic piping, (which breaks the ground) water pipes must not be used for grounding.

8. The NFPA Technical Committee on General Storage of Flammable Liquids considers that providing vents to storage cabinets reduces the limited fire protection provided by such cabinets because a single walled duct will transmit heat faster than a double-walled cabinet. Ventilation of storage cabinets is recommended only when highly odoriferous conditions exist. Ventilation requires a steel duct and an appropriate exhaust fan discharging to an appropriate location outside the building.
9. All chemical storage in cabinets must be compatible.

## **Occupational Safety and Health Administration (OSHA)**

An employer who demonstrates compliance with the exit route provisions of NFPA 101-2000, the Life Safety Code, will be deemed to be in compliance with the corresponding requirements in §§ 1910.34, 1910.36, and 1910.37.

Applicable OSHA Standards:

[1910 Subpart E App - Exit Routes, Emergency Action Plans, and Fire Prevention Plans.](#)

[1910.34 - Coverage and definitions.](#)

[1910.35 - Compliance with NFPA 101-2000, Life Safety Code.](#)

[1910.36 - Design and construction requirements for exit routes.](#)

[1910.37 - Maintenance, safeguards, and operational features for exit routes.](#)

[1910.38 - Emergency action plans.](#)

[1910.39 - Fire prevention plans.](#)