## GENERAL

## 1.0 SCOPE

These requirements cover cabinets intended to be used to provide a storage area for limited quantities of flammable and combustible liquids in containers in compliance to ANSI/NFPA 30. Construction and performance requirements for cabinets are primary based on ANSI/NFPA 30.

A storage cabinet may have a maximum total storage capacity of not more than 120 gallons (454 Liters) Class I, Class II and Class IIIA flammable and combustible liquids shall be stored in a storage cabinet. Of this total, not more than 60 gal. (227 liters) shall be of Class I and Class II liquids. Not more than three cabinets shall be permitted to be located in the same fire area. The maximum capacity rating is assigned by the manufacture.

**2.0 BASIS FOR REQUIREMENTS**

Flammable storage cabinets shall conform to the construction, details and dimensions as set forth in the National Fire Protection Association (NFPA) 30 standards “Flammable and Combustible Liquids Code”.

The requirements of this standard reflect test and practices used to examine characteristics of storage cabinets for the purpose of obtaining and gaining (Factory Mutual Research Corporation) Approval Class Number 6050.

FMRC Approval criteria may include, but are not limited to, performance requirements, marking requirements, examination of manufacturing facilities, audit of quality assurance procedures, and a follow-up program.

Listed cabinets that have been constructed and tested in accordance with FMRC Approval 6050 shall be acceptable, all other cabinets are not acceptable. Approved cabinets must carry the FMRC label.

In addition, all manufacturer’s cabinets shall be constructed, tested and UL (Underwriters Laboratories) #1275 listed under *“Standards for Flammable Liquid Storage Cabinets”*. Approved cabinets must carry the UL 1275 label.

**CONSTRUCTION**

**3.0 MATERIALS**

1. The bottom, top, door and sides of the cabinet shall be at least 18-gauge thick, cold rolled sheet metal.
2. The construction shall be double walled with a 1-1/2” (38 mm) air space.
3. All joints shall be riveted, welded, or of an equally effective construction.
4. Doors shall be provided with a three-point locking arrangement and the door shall be located at least 2 inches (51 mm) above the bottom of the cabinet.
5. Cabinets shall be equipped with optional self-closing doors and a fusible link. An auto-latch and door synchronizer shall be incorporated as an integral function of the cabinet.
6. A means shall be provided for attaching a separate grounding wire at the base of the cabinet on the outside.
7. A cabinet may be equipped with upper and lower side vents. Such vents shall be arranged so they can be plugged externally but also arranged so that they can be opened for connection to ventilating means.
8. If the cabinet is vented for whatever reasons, the cabinet shall be vented outdoors in such a manner that will not comprise the specified performance of the cabinet, as acceptable to the authority having jurisdiction. Ventilation shall provide approximately 10 air changes per hour (3-5 cfm).
9. If the cabinet is not vented, the vent openings shall be sealed with the plugs supplied with the cabinet or with plugs specified by the manufacturer of the cabinet.
10. Mobile cabinets will have vent holes factory plugged with a solid back panel. Unit volume shall hold a minimal of 18 gallons/6.1 liters. Height and width limitations shall be ADA complaint (34” wide x 29-1/4” high x 22” deep). The total dead load of the unit shall be 190 lbs. plus a maximum of 100 lbs. live load or 300 lbs. The unit shall be supplied with the option of manual or self-closing doors.
11. All stationary models shall have removable backs to gain access to utilities for upgrades, repairs and maintenance.
12. Cabinet finish, fabrication and other requirements per this section per Hamilton Laboratory Solutions, 825 East Albert Drive, Manitowoc, WI 54220.

### PERFORMANCE

**4.0 FIRE ENDURANCE TEST**

1. A storage cabinet shall be subjected to a 10-minute fire test using the standard time-temperature curve specified in the Standards for Fire Tests on Door Assemblies, UL 10B (ASTM E152-81a, NFPA 251) *“Standard Methods of Fire Tests of Building Construction and Materials”*, to not more than 325 degrees F (162.8 degrees C) during the fire test. The cabinet shall limit the internal-measured at the center, 1 inch (25.4mm) from the top. All joints and seams shall remain tightly closed during this test. No condition shall develop that indicate disintegration of parts or materials likely to affect the tightness of closure.
2. A production sample of manufacturer’s cabinet shall pass a loading test in accordance with the manufacturer’s rated liquid capacity. Loading is to be maintained for at least 72 hours. There shall be no (1) opening of seams or joints, (2) permanent distortion or deformation, or (3) interference of door opening, closing or locking as a result of this test.

## MARKINGS

**5.0 GENERAL**

1. Each flammable liquid storage cabinet shall be marked with the company name or identification, the model or number designation, and cabinet capacity.
2. Each storage cabinet shall be marked **“FLAMMABLES – KEEP FIRE AWAY”** in letters not less than 2 inches (51 mm) high and in color contrasting to the background.
3. All markings shall be legible and durable. Markings shall be provided by stamping, by a metal name plate, by stenciling or painting, or equivalent.
4. If a manufacturer produces cabinets at more than one factory, each cabinet shall have a distinctive marking to identify it as a product of a particular factory.
5. FMRC Approval Sticker and UL Listing Sticker shall be clearly visible upon the top interior door panel. This sticker shall be a color contrasting to the background.

END OF SECTION