JUSTRITE®

FLAMMABLE
KEEP FIRE AWAY

INFLAMABLE
MANTENGA ALEJADO DEL FUEGO

INFLAMMABLE
TENIR LOIN DES FLAMMES

Cabinets are designed and constructed to limit the internal temperature to not more than 325°F (163°C) when subjected to a 10-minute fire test using the standard time-temperature curve as set forth in the NFPA 251.

To protect people and property from fire risks associated with volatile liquids, store flammable fuels, solvents, and chemicals in specially designed fire resistant safety cabinets. All Justrite safety cabinets meet OSHA and NFPA specifications, and most are independently tested and approved by FM Global.

FULLY COMPLIANT
MEETS
OSHA NFPA
FULLY TESTED

FM
APPROVED

Safety Cabinets for Compliant Safekeeping of Hazardous Liquids

Virtually every place of business has occasion to use flammable or combustible liquids. Whether it is a manufacturing or processing plant, laboratory, or commercial institution, fire risks can be reduced by storing hazardous liquids in flammable liquid safety storage cabinets.

Safety Cabinets serve several critical functions. First and foremost, they provide heat resistant enclosure of flammable liquid containers which helps protect both personnel and property from devastating fires. Cabinets help identify, organize, and segregate dangerous liquids. Often times they can be located near points-of-use, saving time and effort by eliminating frequent trips to a central storage room.

To clearly identify contents, safety cabinets include a visible warning label: "Flammable – Keep Fire Away." Labels that are reflective in nature offer an extra measure of safety. When illuminated with a flashlight during power outages or under smoky conditions, the reflective warning label bursts with high visibility, alerting firefighters or employees to the location of hazardous materials.

Lastly, safety cabinets improve security against unauthorized use of their potentially destructive contents. Justrite cabinets can be padlocked allowing security to be keyed different, keyed alike, or master keyed for employee convenience.

Safety Cabinet Design
Construction and design requirements for safety cabinets are spelled out in NFPA 30, *Flammable and Combustible Liquids Code* and various OSHA regulations. Cabinets must be made of double-walled, 18 gauge (1mm) steel with 1-1/2" (38mm) of insulating air space in the bottom, top, doors, and sides of the cabinet.

Additional requirements are that joints shall be welded, riveted, or made tight by some equally effective means and that the door shall be provided with a three-point latching arrangement. Further, the door sill shall be raised at least 2" (51mm) above the bottom of the cabinet and be labeled "Flammable – Keep Fire Away."

In response to the criteria set forth by NFPA and OSHA, independent testing agencies such as FM and UL have established procedures to test the effectiveness of a flammable liquid storage cabinet. A cabinet is considered acceptable if the internal temperature is limited to not more than 325°F (163°C) when subjected to a 10-minute fire test using the standard time temperature curve as set forth in

NFPA 251, Standard Methods of Fire Resistance of Building Construction and Materials.

Venting
Safety cabinets include dual vents with built-in flame arresters with bungs, typically located on the sides of a cabinet: one high and one low. However, NFPA 30 does not require a cabinet be ventilated for fire protection purposes. Further, the code states that if not vented, the vent openings should be sealed with the bungs provided. It goes on to say that if the cabinet is ventilated for any reason, it should be ducted directly to the outdoors in a manner that will not compromise the performance of the cabinet and that it is done in a manner that is acceptable to the authority having jurisdiction.

To determine if a cabinet should be vented, it is critical the local Fire Marshal/Fire Inspector be contacted for a determination based upon local or state regulations. Additional contacts could be made with the local EHS (Environmental Health and Safety) Officer, an Industrial Hygienist, the covering insurance company, or a corporate manager who is responsible for a company's overall safety directives.

Seismic Protection
For earthquake or hurricane-prone regions, or simply where an added measure of stability is needed, a seismic bracket kit allows for either floor or wall mounting. A mounting kit that does not involve drilling into the cabinet is required so as to not violate the double-walled design, maintaining the fire protection properties of the cabinet and FM approval.

Grounding
Although not required by federal regulations, steel safety cabinets include a built-in grounding lug, generally located at the bottom right side. For safe storage of flammables, it makes good safety sense to ground a cabinet when possible. If dispensing or collection processes are taking place within the cabinet, such as pumping out of a drum or pouring waste into a drum funnel, it is critical the cabinet be connected to an earth ground and proper bonding techniques between containers are followed.

What Makes a Safety Cabinet Safe?

Complies with OSHA 29 CFR 1910.106 and NFPA Code 30, section 9.5

Fire tested and approved by FM Global.

(1) 18-gauge (1mm) double wall steel with 1-1/2" (38mm) of insulating air space for fire resistance.

(2) Fully welded construction holds squareness for longer life, offering greater protection in a fire since air gaps are reduced.

(3) Highly reflective "Flammable – Keep Fire Away" label warns of contents and provides greater visibility when illuminated with a flashlight during fire conditions. Lower reflective label alerts firefighters when rising smoke might obscure higher points.

(4) Rounded corners on doors reduce accidental nicks.

(5) On self-close style of cabinet, doors are held open by means of a fusible link. If inadvertently left open, under fire conditions the link will melt at 165°F (74°C) and automatically close the doors to protect the contents. Two-door cabinets are designed to be self-indexing, so both doors close in the correct sequence.

(6) Stainless steel, 3-point bullet self-latching system provides fail-safe, positive door closure with increased heat resistance.

(7) Flush handle accepts padlock or keys to secure contents from unauthorized use; reduces "catches" from passing traffic.

(8) Shelves are slightly sloped to direct hazardous spills to back and bottom of leak proof sump. They meet ANSI standards with a 350 lb. (159kg) safe allowable load.

(9) Welded shelf hangers interlock for safe, "no-slip" stability and adjust on 3" (76 mm) centers.

(10) Built-in grounding lug accepts optional antistatic wire to safely ground cabinet to earth ground. Optional seismic brackets secure cabinet to floor or wall for an extra measure of security when increased stability is needed.

(11) Dual vents with built-in flame arresters sealed with bung caps.

(12) 2" (51mm) liquid-tight sump safely contains dangerous leaks or spills.

(13) Adjustable leveling feet for stability on uneven surfaces.

➡ Indicates location of 3-point latching system.

Important Considerations When Selecting a Safety Cabinet

Safety cabinets come in a wide selection of colors, sizes, shapes and door arrangements. Beyond choosing a cabinet that meets the requirements of NFPA, OSHA, and carries an FM approval, other factors must be considered.

Chemical Characteristics

It is important to identify and inventory all chemicals to be stored. A review of the Material Safety Data Sheet (MSDS) will determine characteristics and recommended storage practices. To avoid generating toxic explosions and to prevent fires, it is critical to segregate incompatible chemicals. Chemical labeling and training is covered under regulations and the Right-to-Know Act (or Hazard Communication Standard). For easy access to MSDS sheets, Document Storage Boxes are available which adhere directly on a safety cabinet for point-of-use availability.

One factor in choosing a cabinet is how the chemical relates to the construction material of the cabinet itself. For example, for non-flammable acids and corrosive liquids, the construction material should be polyethylene or wood laminate. However, for less aggressive corrosive liquids that exhibit flammable characteristics, a chemically resistant steel cabinet with polyethylene lined shelves is recommended. Cabinets constructed of steel are suitable for flammable liquids, and choosing the correct color helps organize and segregate different types of liquids. While regulatory codes do not mandate the specific color, industry has customarily observed certain colors for defined liquids (see below).

Regulatory and Safety Considerations

As covered earlier, construction criteria must conform to specifications set forth by NFPA and OSHA. In some areas of the country where either the International Fire Code (IFC) or NFPA 1 the Uniform Fire Code is followed, it is further required that the doors of a flammable liquid cabinet shall be well fitted and *self-closing*.

Safety cabinets come in single or two door closure styles: manual or self-closing. Economical manual close doors permit doors to open a full 180 degrees and require the user to physically shut the doors. Self-close, self-indexing doors incorporate a mechanism that automatically shuts doors upon release. Fusible links hold the doors open during use, but if inadvertently left open, will melt at 165°F (74°C) in the event of a fire to automatically close the doors.

Whereas self-closing doors are required in states that adopt a specific fire code, it is recommended that local jurisdictions always be contacted for specific requirements. Self-closing doors ensure closure by taking away the "human element" of potentially forgetting to shut the doors. It is often, therefore, considered the preferred door choice for a good overall safety program. Additionally, self-close mechanisms that are concealed within the top wall of the cabinet are an added benefit, maximizing available storage space.

Whether manual or self-closing, a self-latching door and handle is critical as it does not require the user to manually rotate a handle to ensure the mandatory three-point latch is properly engaged. A stainless steel bullet-type latching system offers positive closure and optimum longevity with increased heat resistance.

All Justrite cabinets have a 3-pt. stainless steel bullet self-latching system, meet OSHA and NFPA, and most are FM approved.

Yellow for flammable liquids

Red for paints, inks, and other combustible liquids

Blue for corrosives

Green for pesticides and insecticides

Silver or neutral colors for laboratory settings

White or gray for waste materials or outdoor lockers

THE SELF-CLOSING STYLE OF DOORS IS REQUIRED IN CERTAIN STATES WHICH FOLLOW AN ADOPTED FIRE CODE SUCH AS THE INTERNATIONAL FIRE CODE (IFC) OR NFPA 1, UNIFORM FIRE CODE.
Contact local jurisdictions for specific requirements.
Below are samples. List is not all inclusive.
100% adopted throughout the state: Alaska, Idaho, Oregon, California, Montana, Utah, Hawaii, Nevada, Washington.
10% to 90% adopted throughout the state: Arizona, Indiana, Iowa, Minnesota, New Mexico, South Dakota, Colorado, Missouri, North Dakota, Texas, Illinois, Kansas, Nebraska, Oklahoma, Wyoming

Capacity Factors

OSHA limits the amount of liquid kept outside of a flammable storage cabinet or inside storage room. Local authorities or insurance companies may require the use of safety cabinets for quantities less than that of OSHA. It is simply a good safety practice to store even the smallest amount of flammables in cabinets rather than on or under benches or in other locations where carelessness could contribute to fire hazards and possible inspection citations.

When choosing a safety cabinet, identify how much chemical capacity is needed for both existing as well as future needs.

Justrite flammable liquid storage cabinets are available in sizes ranging from 4 to 120 gallons (15 to 454 Litres). It's important to note that OSHA states that not more than 60 gallons (227 Litres) of Class I and II flammable liquids, nor more than 120 gallons of Class III liquids may be stored in a single cabinet. However In the 2008 version of NFPA 30, it states that the volume of Class I, II, and IIIA liquids stored in an individual storage cabinet shall not exceed 120 gallons. Nuances between different codes underscore the importance of consulting with local jurisdictions to ensure compliance when handling and storing flammables.

NFPA 30 Section 9.6 further indicates that the total ag-gregate volume of Class I, II, and IIIA liquids in a group of cabinets shall not exceed the maximum allowable quantity (MAQ) per control area based on the occupancy where the cabinets are located. See Table on page 29. The MAQ for "general occupancies" is 120 gallons (454 Litres) of Class IB and IC flammables. Quantity may be doubled when stored in approved flammable liquid storage cabinets or safety cans. The 120 gallon maximum may also be doubled again in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13 *Installation of Sprinkler Systems.* The increase for both situations may be applied accumulatively. Therefore, in the above example, the MAQ of Class IB and IC liquids is 480 gallons (1816 Litres) as it relates to a general occupancy, meeting the sprinkler system requirements of NFPA 13, and where the liquids are stored in compliant safety cabinets or safety cans.

Because allowable quantities and other issues regarding flammable liquids can be different between a myriad of codes and regulations (i.e. OSHA, NFPA, and other Fire Codes), it is critical to always consult the authority having jurisdiction (AHJ) for final determinations.

Beyond code issues, thought should be given to the type of containers being stored and location placement. There are a variety of sizes and shapes available, accommodating safety cans and smaller containers up to storage for large drums, stored either vertically or horizontally.

Security and other Safety Considerations

To secure hazardous contents from unauthorized use, all safety cabinets are lockable. Justrite cabinets include a double key set and are also designed to accept a padlock which also offers a clearly visible deterrent. A padlock allows security to be keyed differently for highly restrictive use, or master keyed or keyed alike for employee convenience. The padlockable feature eliminates the desire to drill into the cabinet to attach a padlock hasp which would violate its FM approval and the cabinet's fire protection property.

To identify flammable contents and alert employees, safety cabinets carry a large, "Flammable – Keep Fire Away" warning label. Trilingual warning labels on Justrite cabinets are reflective in nature. When illuminated with a flashlight during dark conditions, they burst with high visibility and can be seen at a great distance. Strategically placed in high and low zones, their firefighter friendly design allows emergency personnel to locate a cabinet during an investigative walk through, or when crawling in a smoke filled area.

Other things to look for in selecting a cabinet include shelves that meet ANSI standards for safe loading. The ability to direct spills and leaks into the leak proof cabinet sump is a plus. Lastly, choosing a cabinet with quality craftsmanship ensures cabinets will work properly for a long time. Justrite cabinets come with a 10-year limited warranty.