

Subject: Safety Programs and Requirements:

Flammable and Combustible Liquids

Environment, Health, & Safety Manual Date: 09/13/2022

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The State of Arizona operates under the International Fire Code (IFC) 2018. The authority for enforcing fire code is delegated by Arizona State Statute (ARS-37-1381) to the University Fire Marshall, Herb Wagner, at Risk Management Services (RMS). RMS and the delegated University Fire Marshal must adhere to requirements and enforcement of IFC 2018 for fire safety to protect human life and physical assets across campus.

This section addresses the storage requirements of flammable and combustible liquids in Steward Observatory labs and facilities. For the purposes of this section, both flammable and combustible liquids with flash point below 93C (200F) are in the "Flammable" hazard class."

- Flammable Liquid Storage Cabinets IFC 2018 5704.3.2.1.3 "Doors shall be well fitted, self-closing and equipped with a three-point latch." All flammable cabinets in Steward Observatory facilities and labs must have self-closing and latching doors to meet the University Fire Code by September 1, 2023.
 - To retrofit an existing cabinet, use or install only self-closing mechanisms that are approved/sold by the manufacturer for each cabinet make/model. Using closers from the manufacturer meets compliance obligations and allows the manufacturer's warranty/rating guarantees to remain intact.
 - If purchasing a new flammable cabinet be aware and verify in advance that it is self-closing and latching. Cabinets that meet OSHA, ANSI and NPFA standards may not meet IFC 2018 requirements.
 - Cabinets shall be yellow background with red lettering "FLAMMABLE KEEP FIRE AWAY"
 - o Cabinets to be UL1275
 - RMS and Procurement & Contracting will be working together to provide a source for purchase of new flammable cabinets that meet IFC 2018.
 - Facility inspections after **September 1, 2023,** that have flammable cabinets without self-closing doors will be red tagged and ordered to be replaced.
 - If your facility/lab requires additional time, budget restrictions or supply chain issues contact RMS directly.

University Guidelines for Storage of Flammable Liquids.

- No more than 60 gallons of flammable liquids in storage in an approved flammable storage cabinet.
- Excess amounts (greater than 10 total gallons) of aerosol cans of flammable and combustible liquids should be stored in Flammable Liquid Storage Cabinets.



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• No more than 10 gallons of flammable liquids in use in a lab outside of an approved flammable storage cabinet.

- No more than 3 approved flammable storage cabinets in each lab.
 - o Inspections of labs that may exceed the University guidelines will be independently reviewed based on the aggregate floor area, which would include fire rated and non-rated walls, overhead sprinkler systems, cabinets and flammable category of chemicals.
 - Contact RLSS Russel Noon, Chemical Hygiene Officer, 520-626-5089, rnoon@arizona.edu
 - Contact RMS Jeffrey Warren, University Fire Inspector, 520-621-2921, Jeffreyswarren@arizona.edu
- No open flames near storage of flammable containers.
- Combustible liquids are not to be poured into a drain due to the potential for formation of gas pockets in the trap. Sewer disposal of hazardous liquids is illegal.
- Maintain an annual inventory for each cabinet.
- Verify SDS (Safety Data Sheets) for all chemicals stored in Flammable Cabinets.
- All containers are to meet NFPA requirements as described in the following link: http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=30&cookie%5Ftest=1

NFPA 704 diamond signage

Requirements for NFPA 704 diamond signage on University buildings is required only for bulk storage of a hazardous chemical (i.e. a tank (60 gallons) or large container).

- Current locations for such signage include Mt. Lemmon, Kitt Peak and Mt. Graham Power House.
- Contact UA Fire Marshal, Herb Wagner, hwagner@arizona.edu if you have questions on whether your work site and the volume of stored flammables or chemicals may require NFPA 704 signage for emergency response.

More information on fire safety is available at the UA Risk Management Services website. It is important you familiarize yourself with this information at the following link. https://risk.arizona.edu/campus-safety/fire-safety.