Stop Fires that Start from Flammable Liquids



A self-evaluation checklist you can use to help stop fires that originate from flammable liquids.



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Properly safeguarding flammable liquids used in your business can lessen the chance of serious injury, death or property damage that might result from a fire. Such liquids are often used for finishing, degreasing, lubrication or cleaning. They create intense fires that develop temperatures over 2,000 degrees Fahrenhei, spread rapidly and can become very serious in a short period of time.

Step 1

Determine Flash Point

List the names and quantities of all liquids on hand that have a flash point of less than 100 degrees Fahrenheit. Flash point information can be obtained from a Material Safety Data Sheet (MSDS) or from other sources, such as the manufacturer.

Liquid Name

Quantity

Approved safety containers have spring-loaded lids with flame arrestors in the openings. These are available in metal, polyethylene plastic or stainless steel for purity in labs.

Under no circumstances should glass containers be used, except for very small amounts in laboratories.

Number of safety containers needed

Special Storage Cabinet — If you will be storing more than 25 gallons of flammable liquids, you will need a special storage cabinet. These flammable liquid storage cabinets are of special design and offer considerable protection against heat and fire. Up to 60 gallons of flammable liquids are permitted in one cabinet, and up to three cabinets are allowed in the same building or fire area, unless separated from other cabinets by 100 feet.

Number of approved cabinets needed or provided _____

Special Storage room — When the quantity of liquids to be stored exceeds 180 gallons, a special flammable liquid storage room is needed. An alternative is exterior storage in a separate shed or enclosure located 50 feet from the main building.

Storage room needed Yes _____ No _____

Drum Storage — Storing drums of flammable liquids should be avoided unless there is absolutely no alternative. If drums are stored, a cabinet or special room will be needed, and all drums should be provided with spring-loaded pressure-relief bungs to allow them to vent if exposed to heat.

Drum storage Yes _____ No _____

If a flammable liquid storage room is to be used, it must meet the following design criteria outlined in N.F.P.A. Std. 30:

- a) located along outside wall
- b) two-hour cutoff from other areas
- c) explosion-relief panels of one square foot per 30 cubic feet of room volume
- d) explosion-proof electrical equipment
- e) automatic sprinklers on extra hazard of 0.60 gpm/sq. ft. for entire room or special extinguishing system
- f) bonding and grounding straps to minimize static
- g) smoking and open flames prohibited
- h) proper drainage or containment
- i) portable fire extinguishers for Class B fires

For information on or assistance with flammable liquid safety, contact your Utica National Loss Control Representative.

Step 2 Substitution

Substitution is the first safeguard to consider. Can another liquid, which is nonflammable or has a flash point of 100 degrees Fahrenheit or greater, be used?

Assuming you have eliminated as many flammable or combustible liquids as possible, the next step is to $\$ store and use those that remain safely.

Step 3 Safe Storage

Safe storage of liquids that remain in use requires approved safety containers designed for the special requirements of a flammable liquid. They are designed to keep liquids and vapors contained and prevent them from mixing with air.

Safety containers should be used for any flammable liquids stored or used in the building. The liquid should be poured from the container in which it is received into the safety receptacle. Quantities up to five gallons can be kept in such containers.