# Flammable and Combustible Liquids Checklist

This checklist covers the storage and use of flammable or combustible liquids in drums or other containers not exceeding 60 gallons individual capacity.

| **Dispensing and Use** | **Yes** | **No** |
|---|---|---|
| 1. Are only approved pumps, drawing from the top of the storage containers, used to transfer flammable liquids? | ☐ | ☐ |
| 2. Are only approved self-closing valves or faucets used in gravity transfer of flammable liquids from storage containers? | ☐ | ☐ |
| 3. Is air or gas pressure prohibited for transfer of flammable or combustible liquids unless the tank, drum or container has been approved as a pressure vessel? | ☐ | ☐ |
| 4. Are containers and portable tanks used for flammable liquids electrically bonded or grounded during transfers? | ☐ | ☐ |
| 5. Are leaks and spills of flammable or combustible liquids disposed of promptly and safely? | ☐ | ☐ |
| 6. Are spills of flammable or combustible liquids cleaned up promptly? | ☐ | ☐ |
| 7. Is the use of flames or sources of ignition prohibited in areas where flammable vapors may be present?<br><br>Note: 29 CFR 1926.152(f)(3) requires a distance of at least 50 feet between any source of ignition and flammable liquids. | ☐ | ☐ |
| **Storage and Use Quantities** | **Yes** | **No** |
| 8. Is storage of flammable and combustible liquids limited to that required for current activities and maintenance? | ☐ | ☐ |
| 9. Outside of approved cabinets or storage rooms, are containers of Class I liquids limited to a capacity of one gallon, or two gallons, if safety cans are used? | ☐ | ☐ |
| 10. Are fewer than 10 gallons of Class I and Class II liquids stored outside of an approved storage cabinet or interior storage room (except in safety cans)? | ☐ | ☐ |
| 11. Are fewer than 25 gallons of flammable liquids stored in safety cans outside of an approved storage cabinet or interior storage room? | ☐ | ☐ |

| | | |
|---|---|---|
| 12. Are fewer than 60 gallons of Class IIIA liquids stored outside of an approved storage cabinet or interior storage room?<br><br>Note: OSHA under 29 CFR 1926.152(b)(1) does not permit more than 25 gallons of combustible liquids stored outside of an approved storage cabinet or interior storage room. | ☐ | ☐ |
| **Design and Capacity of Containers** | **Yes** | **No** |
| 13. Are only approved containers used for storing flammable or combustible liquids?<br><br>Note: All gasoline must be stored in approved containers. | ☐ | ☐ |
| 14. Are flammable and combustible liquid containers stored in accordance with the requirements of Table 1*? | ☐ | ☐ |
| **Design, Construction, and Capacity of Storage Cabinets** | **Yes** | **No** |
| 15. Is storage in cabinets restricted to not more than 60 gallons of Class I or Class II liquids and not more than 120 gallons of Class III liquids? | ☐ | ☐ |
| 16. Are all cabinets labeled in conspicuous lettering: "FLAMMABLE-KEEP FIRE AWAY"? | ☐ | ☐ |
| 17. Are metal cabinets constructed so that the top, sides and door are at least #18 gauge sheet iron and double-spaced wall with 1-1/2 inch air space? | ☐ | ☐ |
| 18. Is the door provided with a three point lock and a sill raised at least 2 inches above the bottom of the cabinet? | ☐ | ☐ |
| 19. Are wooden cabinets constructed so that the bottom, sides and top are of approved grade plywood at least 1 inch thick? | ☐ | ☐ |
| 20. Are all wooden cabinet joints rabbeted and fastened in two directions with flathead wood screws? | ☐ | ☐ |
| 21. When more than one door is used on wooden cabinets, is there a rabbeted overlap of not less than 1 inch? | ☐ | ☐ |
| 22. Are no more than three (3) cabinets located in one fire area? | ☐ | ☐ |
| 23. Are cabinet vents sealed unless vented to the outdoors? | ☐ | ☐ |

| Design and Construction of Inside Storage Room | Yes | No |
|---|---|---|
| 24. Are openings to other rooms or buildings from flammable/combustible liquids storage rooms provided with a noncombustible liquid-tight raised sill or ramp at least 4 inches in height?<br><br>Note: Alternatively, the floor of the storage area shall be at least 4 inches below the surrounding floor. | ☐ | ☐ |
| 25. Are openings to storage rooms provided with approved self-closing fire doors? | ☐ | ☐ |
| 26. Does storage in inside rooms comply with the requirements of Table 2**? | ☐ | ☐ |
| 27. Is the room liquid-tight where the wall joins the floor?<br>Note: A permissible alternative to the sill or ramp is an open-grated trench inside the room which drains to a safe location. | ☐ | ☐ |
| 28. Is the electrical wiring and equipment located inside the storage room especially designed to prevent possible ignition of any released flammable vapors?<br><br>Note: Anything which looks like normal household wiring including switches, plugs, lighting or any normal equipment such as radios are not permitted. | ☐ | ☐ |
| 29. Is every inside storage room provided with either a gravity or mechanical exhaust ventilation system? | ☐ | ☐ |
| 30. Does the ventilation system have an exhaust not more than 12 inches off the floor? | ☐ | ☐ |
| 31. Does the ventilation system provide for a complete change of air within the room at least six times per hour? | ☐ | ☐ |
| 32. If a mechanical exhaust system is used, is the switch located outside of the door? | ☐ | ☐ |
| 33. Are ventilation equipment and lighting fixtures operated by the same switch? | ☐ | ☐ |
| 34. When gravity ventilation is provided, are the fresh air intake, as well as the exhaust outlet from the room, located on the exterior of the building in which the room is located? | ☐ | ☐ |
| 35. Is there a 3 foot wide clearance in the aisle in every storage room? | ☐ | ☐ |
| 36. Is stacking of 30 gallon capacity containers prohibited? | ☐ | ☐ |

| General Storage Inside and Outside Building | Yes | No |
|---|---|---|
| 37. Is the storage of flammable or combustible liquids prohibited near exits, stairways, or areas normally used for the safe exit of people? | ☐ | ☐ |
| 38. Is the storage of flammable or combustible liquids prohibited in office areas except that required for maintenance and operation of building and operation of equipment?<br><br>Note: Permitted materials shall be stored in safety cans, in closed metal containers inside storage cabinets, or in an inside storage room that does not open into public areas of the building. | ☐ | ☐ |
| 39. Are portable fire extinguishers available at locations where flammable or combustible liquids are stored?<br><br>Note: OSHA requires that at least one portable fire extinguisher having a rating of not less than 20-B units be located not less than 25 feet, nor more than 75 feet, from any flammable liquid storage area located outside. | ☐ | ☐ |
| 40. Are containers of flammable and combustible liquids closed when not in use? | ☐ | ☐ |
| 41. Are combustible waste materials and residues kept to a minimum, stored in covered metal receptacles, and disposed of daily? | ☐ | ☐ |
| 42. Are flammable and combustible liquids stored in their original container or in an approved safety can? | ☐ | ☐ |
| 43. Unless the original container is designed to be used, are flammable or combustible liquids transferred to an approved safety can prior to use? | ☐ | ☐ |
| 44. Are open flames and smoking prohibited in flammable or combustible liquids storage areas? | ☐ | ☐ |
| 45. Are storage areas for flammable or combustible liquids kept free from combustible materials? | ☐ | ☐ |

Date of Inspection: _____

Location of Inspection: _____

Signature of Inspector: _____

## *Table 1: Maximum Allowable Size of Containers and Portable Tanks

| Container Type* | Flammable Liquids | | | Combustible liquids | |
|---|---|---|---|---|---|
| | Class IA | Class IB | Class IC | Class II | Class III |
| Glass or approved plastic | 1 pt | 1 pt | 1 gal | 1 gal | 1 gal |
| Metal (other than DOT drums) | 1 gal | 5 gal | 5 gal | 5 gal | 5 gal |
| Safety cans | 2 gal | 5 gal | 5 gal | 5 gal | 5 gal |
| Metal drums (DOT specifications) | 60 gal | 60 gal | 60 gal | 60 gal | 60 gal |
| Approved portable tanks | 660 gal | 660 gal | 660 gal | 660 gal | 660 gal |

*Note: Container exemptions: medicines, beverages, foodstuffs, cosmetics, and other common consumer items, when packaged according to commonly accepted practices.

## **Table 2: Storage in Inside Rooms

| Fire Protection Provided[1] | Fire Resistance | Maximum Size | Total Allowable Quantities [2] |
|---|---|---|---|
| Yes | 2 hours | 500 sq. ft. | 10 |
| No | 2 hours | 500 sq. ft. | 5 |
| Yes | 1 hour | 150 sq. ft. | 4 |
| No | 1 hour | 150 sq. ft. | 2 |

[1]Fire protection system shall be sprinkler, water spray, carbon dioxide, or other system.

[2](gals/sq. ft/floor area)

## Definitions

Approved: approved or listed by a nationally recognized testing laboratory.

Class I liquids: flammable liquids (see definition of flammable liquids).

Class I liquids: flammable liquids having a flash point below 73ºF and a boiling point below 100ºF. Typical Class IA liquids include: acetaldehyde, ethyl ether, methyl ethyl ether, pentane, and petroleum ether.

Class IB liquids: flammable liquids having a flash point below 73ºF and having boiling points at or above 100ºF. Typical Class IB liquids include: acetone, benzene, butyl acetate, denatured alcohol, ethyl alcohol, gasoline, gin (ethyl alcohol and water), heptane, hexane, isopropyl alcohol, methyl alcohol, methyl ethyl ketone, toluene, and jet fuels.

Class IC liquids: flammable liquids having flash points at or above 73ºF and below 100ºF. Typical Class IC liquids include: banana oil (isoamyl acetate), butyl alcohol, propyl alcohol, styrene, turpentine, and xylene.

Class II liquids: flammable liquids with flash points at or above 100ºF and below 140ºF. Typical Class II liquids include: diesel fuel, fuel oils, kerosene, Stoddard solvent, anchor-type car wash, and mineral spirits.

Class III liquids: flammable liquids with flash points at or above 140ºF. Class III liquids are subdivided into two subclasses: Class IIIA liquids include those with flashpoints at or above 140ºF and below 200ºF, except any mixture having components with flashpoints of 200ºF, or higher, the total volume of which make up 99% of more of the total volume of the mixture. Class IIIB liquids include those with flashpoints at or above 200ºF. This section does not cover Class IIIB liquids.

Class IIIA liquids: flammable liquids with flash points at or above 140ºF.

Combustible liquid: any liquid having a flash point at or above 100ºF. Combustible liquids are known as Class II and Class III liquids.

Flammable liquid: any liquid having a flash point below 100ºF and a vapor pressure not exceeding 40 psia (pounds per square inch absolute) at 100ºF. Flammable liquids are known as Class I liquids and can be divided into Class IA, IB and IC.

Flash point: the minimum temperature in degrees Fahrenheit at which a flammable liquid will give off sufficient vapors to form an ignitable mixture with air near the surface or in the container, but will not sustain combustion.

Source:

Centers for Disease Control and Prevention. NIOSH. Flammable and Combustible Liquids Self-Inspection Checklist. (2014, June 6). Retrieved from http://www.cdc.gov/niosh/docs/2004-101/chklists/r1n39f~1.htm

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