WEEKLY SAFETY MEETING

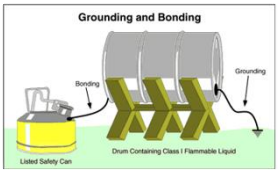
FLAMMABLE AND COMBUSTIBLE LIQUIDS

FLAMMABLE (EXPLOSIVE) LIMITS - When vapors of a flammable or combustible liquid are mixed with air in the proper proportions in the presence of a source of ignition, rapid combustion or an explosion can occur. The proper proportion is called the **flammable range** and is also often referred to as the **explosive range**. The flammable range includes all concentrations of flammable vapor or gas in air, in which a flash will occur or a flame will travel if the mixture is ignited. There is a minimum concentration of vapor or gas in air below which propagation of flame does not occur on contact with a source of ignition. There is also a maximum proportion of vapor in air above which propagation of flame does not occur. These boundary-line mixtures of vapor with air are known as the **lower and upper flammable limits (LFL or UFL)** respectively, and they are usually expressed in terms of percentage by volume of vapor in air.

This section applies only to the storage of flammable or combustible liquids in drums or other containers (including flammable aerosols) not exceeding 60 gallons individual capacity. Basically, flammable liquids have a flash point below 100°F. Combustibles have a flash point greater than 100°F.

Guidelines:

- Flammable and combustible liquids used in and around mechanical construction can be very hazardous. Especially since there are so many potential sources of ignition such as welding sparks, flames from acetylene cutting torches, brazing operations, cigarettes, etc.
- Whenever possible substitute flammable or combustible liquids with non-flammable/ combustible liquids that do the same job. Eliminating the hazard is the best option.
- When you can't substitute, keep the quantities of flammable/combustible liquids as small as possible. Keep only the amount you will use right away.
- Flammable cabinets should be positioned at least 25 feet from any doorway.
- Flammable liquids should be kept in flammable cabinets. Doors to cabinets must be closed.
- Not more than 60 gallons of Class I and/or Class II liquids, or not more than 120 gallons of Class III liquids may be stored in an individual cabinet.
- Flammable or combustible liquids, including stock for sale, shall not be stored so as to limit use of exits, stairways, or areas normally used for the safe egress of people.
- Common flammable and combustible liquids used in our business include gasoline, other petroleum products, benzene and other cleaning solvents.
- Keep these liquids in containers designed specifically for their use. Metal safety cans with self-closing lids that are UL Approved must be used.
- Every container should be properly and clearly labeled so workers won't unintentionally use the wrong liquid. For example, don't use a container labeled for gasoline to store a cleaning solvent or diesel fuel. Doing so could lead to a hazardous situation.
- Never mix different types of fuels. Always store fuel liquids in the properly marked and colored container. RED designates Gasoline; YELLOW designates Diesel Fuel; BLUE designates Kerosene.
- Be constantly aware of the location of these liquids in relation to sources of ignition.
- Keep them well away from ignition sources even though they are in approved containers.
- Static electricity can be a source of ignition. When transferring one of these liquids from a drum to a smaller container protect yourself from this ignition source by grounding the drum first. Then bond the drum and container by attaching a conductive wire from the drum to the container.



- Storage in inside storage rooms shall comply with the following:
  - With Fire Protection Provided, Maximum Floor Area 500 (ft^2), Total Allowable Quantity 10 gallons
  - Without Fire Protection, Total Allowable Quantity 4 gallons
- Every inside storage room shall be provided with either a gravity or a mechanical exhaust ventilation system designed to provide for a complete change of air within the room at least six times per hour. Ventilation is vital to the prevention of flammable liquid fires and explosions. It is important to ensure that air flow through the system is constant and prevents the accumulation of any flammable vapors.
- Aisles of at least 3 feet in width shall be maintained to access doors, windows or standpipe connections.
- At least one portable 10# fire extinguisher shall be located outside of, but no more than 10 feet from, the door opening into any room used for flammable storage.

Meeting Date: _____ Trainer: _____

Supervisor: _____ Location: _____

Attendees: (Please print clearly)

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

WINGER companies

WEEKLY SAFETY MEETING

FLAMMABLE AND COMBUSTIBLE LIQUIDS QUIZ

1. Common flammable and combustible liquids used in our business include:
   A. Gasoline
   B. Benzene
   C. Othering cleaning solvents & petroleum products
   D. All of the above _____

2. Potential sources of ignition include: welding sparks, flames from acetylene cutting torches, brazing operations, cigarettes, etc. True or False? _____

3. Eliminating the hazard is the best option. True or False? _____

4. Flammable cabinets should be positioned at least 25 feet from any doorway. True or False? _____

5. At least one portable 10# fire extinguisher shall be located outside of, but no more than 10 feet from, the door opening into any room used for storage. True or False? _____

6. Doors on flammable cabinets should be left open. True or False? _____

7. Every container should be properly and clearly labeled so workers won't unintentionally use the wrong liquid. True or False? _____

8. Plastic gas cans are allowed on construction sites. True or False? _____

9. Always store fuel in the properly marked & colored container:
   - Red --- gasoline
   - Yellow --- diesel fuel
   - Blue --- kerosene

   True or False? _____

10. Protect yourself from this ignition source by grounding the drum first when transferring liquids from a drum to a smaller container. True or False? _____

11. Be constantly aware of the location of these types of liquids in relation to sources of ignition. True or False? _____

Printed Name: _____ **Trained by:** _____

Signature: _____ **Trained by Signature:** _____

Date: _____ **Location:** _____