Flammable Liquids

5-Minute Talk

Overview of Topic

Flammable liquids give off ignitable vapors, therefore, wherever flammables are located, workers must be aware of ignition sources.

Most flammable liquid vapors are heavier than air and will accumulate in low areas. When vapors accumulate sufficiently, they spread and may eventually reach an ignition source. The ignition sources might be cigarettes, a sparking hand tool, an operating motor, cutting torch, welder, or others.

Categories of Flammable Liquids

Flammable liquid means any liquid having a flashpoint at or below 199.4°F. The flash point is the temperature at which a liquid produces enough vapors to be ignited. The lower the flash point, the more flammable the material. There are four categories of flammable liquids:

- Category 1 – having flash points below 73.4°F and having boiling points at or below 95°F.
- Category 2 – having flash points below 73.4°F and having boiling points above 95°F.
- Category 3 – having flash points at or above 73.4°F and at or below 140°F. When a Category 3 liquid with a flash point at or above 100°F is heated for use to within 30°F of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint below 100°F.
- Category 4 – having flash points at or above 140°F and at or below 199.4°F. When a Category 4 flammable liquid is heated for use to within 30°F of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint at or above 100°F.

When a liquid with a flashpoint greater than 199.4°F is heated for use to within 30°F of its flashpoint, it shall be handled in accordance with the requirements for a Category 4 flammable liquid.

Safety Data Sheets

An easy way to identify the hazards of flammable liquids is to use safety data sheets (SDSs). The SDS will provide information on fire and explosion hazards and any special handling and storage precautions.

Disposal

Disposing of waste flammable liquids requires as much caution in handling as do any of the other stages of use. Oily, solvent-soaked rags can easily start a fire. A pile of solvent-soaked rags builds up heat on its own—sometimes enough heat to start a fire.

Spill cleanup

It is the vapors, rather than the liquid itself, that will burn. When the liquid is spilled, vapor release begins immediately, and continues until the liquid is removed. Cleanup of incidental spills of flammable liquids should be prompt.

Specially designed absorbent materials have been developed for spill cleanup. These products are offered in pillows, pads, sheets, tubes and other shapes to fit different cleanup needs.

Once the absorbent material is saturated, it should be placed in a sealed container to control the vapor.

Other spill clean-up alternatives include the use of special pumps or vacuum equipment.

Employee Training

There are no specific training requirements for flammable liquids. However, at §1910.106(b)(5)(vi)(v)(3), the rule requires that "tank station operators and other employees . . . are thoroughly informed as to the location and operation of such valves and other equipment necessary to effect these requirements." This applies to tank storage in flood-prone areas.

Training Tips

Review §1910.106—Flammable liquids. Using the employee handout, review the requirements of the rule.

Identify what flammable liquids are present in the facility, where they are located, and what they are used for.

Review the company procedures for spill cleanups, and the location and availability of spill cleanup supplies in the workplace.

Where To Go For More Information

29 CFR 1910.106—Flammable liquids Sample SDSs for flammable liquids in your workplace