Flammable Liquids: Prevent Fire Hazards

Handout

Overview

A flammable liquid is a liquid that ignites easily and burns quickly. Gasoline, acetone, lacquer, or thinner are examples of flammable liquids. Once ignited, flammable liquids burn intensely, are explosive under specific conditions, and can spread rapidly.

The flash point is the temperature at which a liquid produces enough vapors to be ignited. More than any other factor, flash point determines the flammability hazard of a liquid - 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 100ºF.

When a liquid with a flashpoint greater than 199.4°F is heated for use to within 30°F of its flashpoint, it must 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 with Safety Data Sheets (SDSs). They provide the following information:

- The product's hazardous ingredients
- The physical data
- Fire and explosion hazards
- Reactivity data
- Conditions to avoid

- Special precautions, usually storage and handling

Handling and Storage

Proper handling and storage of flammable liquids is crucial to fire prevention plans. There are two typical ways to store flammable and combustible liquids:

- Reserve storage in drums
- Operational storage in small quantities

Transfer of liquids relies on dispensing methods. This can be done in one of two ways:

- Gravity flow for horizontally stored drums
- Pump method for vertically stored drums

Warning Signs

Post “NO SMOKING” signs where hazards from these liquids are present because of the ignitable vapors flammable liquids give off.