

Loss Control Insights

GASOLINE SAFETY CANS

Gasoline is an extremely flammable liquid fuel. It should always be handled and stored properly in order to reduce the likelihood of fires and explosions. Personal injuries ranging from first degree burns to fatalities can result from improper handling and storage practices. Safety cans are designed to control the flammable vapors of gasoline and to provide a safe and convenient means for storage and transfer. Underwriters Laboratories (UL) *approved* safety cans should be used to carry, dispense, and store gasoline in quantities up to five gallons.

Failure to use approved *metal* containers for flammable or combustible liquids has often been cited by compliance officers. However, earlier this year, OSHA revised the rule on safety cans (1926.152(a)(1), allowing D.O.T. approved *plastic* safety cans. It was further determined that these plastic containers need not be equipped with a spring closing lid, spout cover and flash arresting screen.

Nevertheless, many state safety codes and jurisdictions will allow only metal safety cans on the worksite, at least until local codes are changed. Construction managers may feel that plastic will not hold up as well under heavy use and handling. Whatever standards must be followed, it is important to understand the features and benefits of a safety container so that you and your co-workers can best guard against fire or explosion.

Approved safety cans have several basic design qualities:

- They have a spring loaded cap that closes the spout automatically when released. Tension in the spring forces the cap closed and provides a leak proof seal.
- The spring tension is also designed to lift the cap slightly in the event of excessive internal vapor pressure inside the can. This automatically vents off vapors at approximately five psi internal pressure, to prevent the can from rupturing or exploding if it is exposed to excessive outside heat.
- The spout is also equipped with a flame arrester screen designed to prevent outside fire from reaching the gasoline inside the can. This is the same type of screen that is found in marine gasoline engine carburetors. With the screen in place, if the can is involved in a fire, the vapors will burn around the spout, but will not permit an internal fire or explosion. This screen must not be removed or damaged. Sometimes safety cans are also used to hold thick liquids such as lubrication oil, which is not recommended. Since the heavy liquid will not pass

through the screen, the screen is often removed, defeating an important safety feature of the container.

Finally, it is extremely dangerous to carry gasoline--even in a safety can--in the trunk of a vehicle. If the trunk heats up from the sun, the contents of the can will expand and pressure will raise the sprung cap. This permits vapors to accumulate in the trunk, and an explosion may result.

Do your part to prevent fires that can lead to serious burns, loss of life and significant property damage. Whether it is required or just good sense, always use *approved* safety cans when handling gasoline or other flammable liquids. Periodically inspect the cap, spring and flame arrester screen as well, to be sure it will provide the safety you expect.

USING PORTABLE FIRE EXTINGUISHERS

In the event of a fire, the correct use of a portable fire extinguisher could mean the difference between suffering a minor loss or a major one. Portable fire extinguishers, if used properly, can make that difference. But there are several things to consider in using fire extinguishers. For instance, you must know the *class* of fire involved and the correct *type* of fire extinguisher to use.

CLASSES OF FIRES AND FIRE EXTINGUISHERS:

Class A Involves ordinary combustibles such as paper, wood, cloth, rubber or plastics. The common extinguishing media is water or dry chemical.

Class B Flammable liquids, grease or gases are covered under this category.

Common extinguishing media are foam, carbon dioxide or dry chemical.

Class C Live electrical fires are class C fires. CO₂ or dry chemical extinguishers should be used. However, the actual burning product may be class A items.

Class D Burning materials include combustible metals such as magnesium and sodium. Special extinguishing agents, approved by recognized testing laboratories, are needed when working with these metals.

RESPONDING TO FIRES:

Sound the fire alarm and call the local fire department immediately if a fire breaks out. Follow your company's procedures on responding to fires. But attempt to *fight* the fire only if, (1) you know the type of combustible material burning, (2) you have been trained to use the fire extinguisher correctly, and (3) if the fire is still in the incipient (beginning) stage. If the fire gets too large or out of control, evacuate immediately.

REMEMBER P-A-S-S WHEN USING AN EXTINGUISHER:

P - Pull. Pull the locking pin before using the fire extinguisher.

A - Aim. Aim the fire extinguisher at the base of the fire. Not at the flames or smoke.

S - Squeeze. Squeeze the lever of the fire extinguisher to operate and discharge.

S - Sweep. Sweep the fire extinguisher back and forth at the *base* of the fire to extinguish.

(Most extinguishers will only allow about 10-seconds of extinguishing media.)

Prevention is the key when it comes to firefighting. Good housekeeping, proper storage procedures and safe work practices will go a long way toward reducing the likelihood that a fire will destroy valuable property or injure either you or a fellow employee.