

Transfer – Safety Cans for Liquid Transfer

Safety Cans for Storage and Transfer

Approved safety cans (required by OSHA) are the most familiar safety equipment seen in many plants and probably among the least understood as to what they are and what they must do.

The basic purpose of a safety can is to control flammable vapors, while providing a safe and convenient means of carrying, dispensing and storing up to 5 gallons (19 Litres) of flammable liquid.

This requires that the can must:

1. Be leak tight;
2. Automatically vent vapor between 3 and 5 psig (0.2 and 0.35 bar) internal pressure to prevent rupture (or explosion in event of fire);
3. Prevent flame from reaching the flammable liquid contents through the spout;
4. Automatically close after filling or pouring.

Beyond guarding against possible fire and explosion, safety cans must be able to resist damage and wear in normal usage, permit ready, convenient use in pouring, filling and carrying and be properly marked to identify their contents. OSHA standards for portable safety containers for flammable liquids having a flashpoint at or below 80°F (27°C) require the safety can be red with a yellow band around the container or stenciling of identification of the can contents. All Justrite safety cans carry a yellow band with a large area on the band for the user to identify contents to

reduce misuse. Justrite safety cans offer a 10-year limited warranty.

Several different types of safety cans as well as a full range of can capacities are needed for most convenient, efficient service in various use situations. These include Type I and Type II safety cans, galvanized steel and nonmetallic can bodies, faucet and tilt-rack laboratory cans and wide-mouth disposal cans. All Justrite safety cans are UL listed and/or FM approved.

To provide information necessary to put the right safety cans to their best uses, brief design and application data for each type follows.

Cap operating mechanisms on safety cans are spring-loaded and self-closing to provide a leakproof spout seal, and pressure relief venting. Either attached to or integral with the cap operating mechanism is a can carrying handle. Design of the handle will greatly affect the convenience of carrying and using safety cans. The best design will swing to distribute weight evenly and protect the cap when not in use. It will also enable the user to open the cap without any awkward secondary linkages.

Spring pressure is applied to the self-aligning cap and its sealing gasket to make a leakproof seal with the rim of the can spout. The spring tension that seals the cap is also designed to allow the cap to lift to relieve excessive internal pressures.

Flame arrester screens inside the cap spout are essential to prevent fire flashback to the can contents. Flame arresters in Justrite safety cans are

long length and stainless steel construction with large surface area to permit full-flow filling and pouring.

A flame arrester works because it provides such rapid dissipation of heat from fire that vapor temperature on the inside of the can remains below the ignition point. Employees must be instructed not to remove or damage flame arrester screens. Any holes punched in the screens change the heat-absorption characteristics of the area involved and may nullify the effectiveness of the unit.

Capacity ratings. Safety cans must not be filled above their rated capacity, which is up to the seam that joins a metal can top to the body or to a fill level mark on a nonmetallic can. Overfilling can result in dangerous liquid overflow from the spout if high external temperatures occur.

Approvals. Safety cans are designed to meet specifications set forth by the Occupational Safety and Health Administration (OSHA) and the National Fire Protection Association (NFPA). Additionally, most have earned certification from third parties such as FM Global (FM), Underwriters Laboratories (UL/ULC), and the Technical Inspection Association (TÜV).



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