



UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

Memorandum

Date: January 3, 2003

TO : Suzanne Barone, HS
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THROUGH: Warren J. Prunella, Associate Executive Director for Economic Analysis

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SUBJECT : Market Information --- Gasoline Cans *wj*

This memo provides preliminary information on the US residential market for gasoline cans, and information on the potential costs of adding child-resistance (CR) features to these products. This information is to be used in the CPSC staff's preliminary work regarding child-resistance for gasoline cans. The following information was developed through contacts with gasoline can manufacturers, public information available through the Internet, the "Portable Fuel Container Spillage Report" (California Environmental Protection Agency, 1999), and follow-up contacts with California state sources.

Types of Gasoline Cans

In 1978, the Commission was petitioned to develop a mandatory safety standard for portable gasoline cans. The staff's briefing package differentiated between a broad category, "gasoline container" (a portable container that may or may not be marketed specifically for gasoline use and storage), a more specific category of "gas can" (a portable container expressly for gasoline use), and "safety can" (a non-CR gasoline can with additional features, such as a spring-loaded cap, pressure release vent, and non-sparking and non-spill features), which is a subgroup of "gas cans." While the types of gas cans in common use at that time were significantly different than today, these general categories of containers are still pertinent.

In the 1970s and early 1980s, the most common types of gas cans were flat-sided thin-gauge steel "tins," most typically in the one- and two-gallon sizes. In the early 1980s, plastic gas cans were introduced. Plastic gas cans dominated the market by the early 1990s. A residential survey conducted in 1999 for the California Environmental Protection Agency found that 76% of all gas cans in residential use in California were plastic.

There is a substantial number of other volatile liquids, such as varnish removers, turpentine, camp stove white gas, and paint strippers, that are sold in older-design "tins." Some of these tins may see subsequent use as gas containers after they are empty of the purchased liquids.

Virtually all gas cans currently being marketed are of molded plastic design, in one- and two-gallon sizes. Except for a small number of thin gauge steel cans, the remaining gas cans are "safety cans" of much heavier gauge metal (24 gauge steel). Industry sources report that plastic cans now represent 95% or more of all gas cans sold. An estimated 20 million gas cans are sold annually; thus, perhaps 1 million are of steel. One-gallon cans are estimated to account for about 60% of all gas cans sold in the US. There are reportedly little or no imports of gas cans (except from Canada, which may account for as much as 10% of US gas can sales); the cost of freight is said to limit imports.

Manufacturers

The **Thomas Register**, an industry information source, lists over 200 US and Canadian manufacturers of products that may be considered "gas cans." They are listed as gas cans, gas containers, gasoline cans, gasoline containers, fuel cans, and fuel containers. A review of individual manufacturers' websites reveals that many of these manufacturers are marketing to commercial and industrial users. Contacts with members of the ASTM subcommittee for portable fuel containers indicate that there are six significant manufacturers of gas cans for consumer use in the US and Canada. Of these, one firm is considered the market leader, accounting for over ½ of total US sales; industry contacts stated that these six firms account for virtually all gas can sales in the US.

Retail Prices

Plastic one-gallon gas cans typically retail for about \$2, and two-gallon plastic cans retail for \$3 to \$3.50 each. A consumer is likely to purchase a smaller-sized gas can at the same time as purchasing a new gas-powered tool, such as a lawn trimmer or snow blower that may require a mix of gasoline and oil (such as with a 2-stroke engine).

Metal "safety cans" typically retail for \$25 in the one-gallon size, while the metal five-gallon metal safety cans retail for about \$30 each. There is also a limited number of "jerry cans" on the market, retailing for about \$15. Jerry cans derive their name from the British military (describing a German gas can design), and contain 4.5 imperial gallons, which is equivalent to 5.4 US gallons. Jerry cans are made of heavy gauge steel like safety cans, but do not typically incorporate the safety features that are the major cost difference associated with safety cans.

Useful Life

Industry sources indicate that plastic gas cans experience an average useful life of perhaps 3-5 years, while metal safety cans have an average useful life of 25 years or more. The substantially longer useful life of metal cans tends to support the California EPA survey (referenced earlier) that found that 24% of gas cans in use were of metal. The CA residential survey conducted in 1999 found that the average age of gas cans in that state was 5.5 years.

Number in Use

The California survey found that 46% (or 5.2 million) of all 11.4 million California households had at least one gas can, and that there were .8 gas cans per household (or 9.1 million cans); this indicates that as many as 3.9 million households had more than one can. If national use of gas cans were similar to that of California, about 48 million households would have at least one gas can, and there would be about 80.5 million gas cans in household use.

Child-Resistance

Staff have estimated the cost of applying child-resistant (CR) closures on plastic gas cans. One firm currently markets a one-gallon plastic gas can with CR closures in 3 locations --- the spout, the fill port, and the vent port. As shown on the manufacturer's website, this style of can

retails for about 75 cents more than apparently similar cans; it is not clear, however, whether the increased cost is solely related to the addition of the CR feature. Another manufacturer is studying designs to incorporate the CR feature in cans while eliminating the vent port; the firm's marketing director stated that adding the CR feature may be accomplished with "little or no extra cost" because of savings derived from eliminating the vent. However, the extent of additional costs will not be known until the cans are in production.

Industry sources were unable to estimate the cost of adding CR features to a metal can, but some modification may be needed for even metal "safety cans" in order to comply with any CR requirement.

In 2001, emissions regulations regarding gasoline cans went into effect in California. (Although the California regulations use the word "container," the subject products are specifically intended for gasoline storage and would be more closely identified with the definition of gas cans used in this paper.) The resulting changes in gasoline can designs may provide some level of child-resistance. Four other states, Pennsylvania, New York, Maryland, and Delaware have also passed state laws similar to California's gasoline container law. Together, these five states represent about 25% of the US population. Three current manufacturers estimate that the California emissions regulation added \$4-7 to the retail price of each complying gasoline container.

The California survey uncovered issues that may have an impact on the potential effectiveness of any CR feature. The survey found that 30% of gas cans in residential settings were stored empty, and some proportion of surveyed gas cans were stored without a cap or with something else acting as a cap.