

are tested as follows. After soaking in water, a 25-pound vertical pull test is performed in an attempt to remove the suction cups from the seat. After soaking in water, a 25-pound pull test is performed on a seat installed on a smooth bathing surface, in an attempt to disengage the suction cups from the bathing surface. The seat is installed and removed 2000 times on a smooth bathing surface and the second pull test is repeated.

Leg Openings (added in 2003): A torso probe is inserted in the most adverse orientation into each opening of the bath seat from the direction of the occupant seating surface. A 15-pound force is applied. To comply, the bath seat must not permit passage of the torso probe. The tapered end of a shoulder probe is inserted in the most adverse orientation into each opening of the bath seat from the direction of the occupant seating surface. A 15-pound force is applied to the probe in the direction of the major axis. The force is released and a 10-pound force is applied to the top 1.0 inch perimeter of the probe in a direction vertically toward the seating surface. To comply, the 1.0 inch perimeter shall not be permitted to contact the seating surface of the bath seat.

October 2003 ASTM Meeting. On October 1, 2003, the ASTM Bath Seat Subcommittee met and voted to issue a concurrent Main and Subcommittee ballot that will include proposed new stability and labeling requirements.[1] The proposed stability requirement is identical to the stability requirement the Commission is proposing in this NPR. The proposed labeling requirement being balloted is similar to the first two lines of the label the Commission proposes in this NPR. The ASTM proposed label states:

WARNING

Children have drowned when left unattended in bath seats. ALWAYS keep child within arm's reach.

The ballot with these two proposals was issued on November 3, 2003, and results are due back December 8, 2003. The results should be reviewed and discussed at the next ASTM Bath Seat Subcommittee meeting in March 2004.[1]

F. The Proposed Ban

The proposed rule would ban bath seats that do not meet specified requirements for stability, leg openings, and labeling. After considering the incident reports, the Commission believes that these proposed requirements will address the major

hazard scenarios involved in bath seat drownings.

1. Stability Requirement

As discussed above, 117 reported incidents involved the bath seat tipping over (32 deaths and 85 non-fatal incidents or complaints). Bath seats currently on the market depend on suction cups for all or part of their stability. If the suction cups fail, either by detaching from the product or detaching from the tub surface, the bath seat can become unstable and tip over.[2]

Most of the reports concerning bath seats tipping over were based on incidents where suction cups on the bottom of the bath seat failed to adhere to the bathtub surface during a child's entire bath. This can happen for several reasons including degradation of the suction cups over time, or dirty or soapy surfaces that affect adhesion of the cups to the tub. In addition, suction cups will not reliably adhere to slip-resistant tubs. In these incidents, failure of the bath seat to continuously adhere to the surface results in an unstable product.[2]

The ASTM subcommittee for bath seats identified this problem, and the current ASTM F 1167-03 requires that manufacturers include warnings against using bath seats on slip-resistant surfaces. However, the current voluntary standard does not require testing on slip-resistant surfaces.[2]

It can be difficult for a consumer to identify a "slip-resistant" tub. Although many slip-resistant tubs have texturing that is easily identified (such as a sandpaper-like finish, a pattern of ridges, or consumer-added appliques) some slip-resistant surfaces have a very subtle finish. A convenience sampling of slip-resistant tubs at a home improvement store by CPSC staff showed some tubs that appeared to be smooth, even though they were "slip-resistant." During testing, CPSC staff noted that suction cups can temporarily form a seal on some abrasive surfaces if the surface has already been flooded with water, but the seal does not last.[2]

Because identifying slip-resistant tubs might be difficult, and testing can be misleading, the Commission believes that warning against the use of bath seats on slip-resistant surfaces will not be effective at preventing incidents. Therefore, the Commission proposes that bath seats' stability be tested on slip-resistant surfaces.

The proposed performance requirement is similar to the stability requirement in ASTM F 1967-03, but instead of testing on a smooth surface, it requires the product to be tested on

a slip-resistant surface. The Commission proposes that the slip-resistant test surface be defined as a surface on which commercially available, adhesive backed, slip-resistant tread strips have been applied. Slip-resistant tread strips are used in many applications such as walkways and stairs, as well as bathtubs, to provide traction against slipping. The Commission is not aware of any standard for slip-resistant tread strips, but the desired result of an uneven surface is an inherent characteristic of any slip-resistant tread.[2&4]

A performance requirement that requires all products to remain stable on slip-resistant bathing surfaces should reduce the likelihood of tip-over incidents that are due to surface adhesion failure. A bath seat that is stable on slip-resistant surfaces could depend on its geometry and construction for stability rather than on suction cups. An object will fall over when its center of gravity lies outside its supporting base. The supporting base of bath seats could be designed to be wide enough to prevent tip-overs. Another potential approach might be a bath seat that attaches to one or both of the tub sides.[2&4]

2. Leg Opening Requirement

As discussed above, 21 reported incidents involved children submerged or entrapped in bath seats (3 deaths and 18 non-fatal incidents or complaints). Over the last two years, CPSC staff worked as part of an ASTM task group to develop a performance requirement to address the entrapment and submersion hazard. The performance requirement the task group developed tests all side and leg openings with two test probes—a torso probe and a shoulder probe. To comply with the requirement, the torso probe must not pass through any side or leg openings, and the shoulder probe must not slide through any side or leg openings nor be able to rotate in a manner that allows the upper end of the probe to touch the seating surface.[2&4]

The torso probe is identical to the probe used in the current high chair standard, ASTM F 404-99a, since high chairs are intended for the same minimum developmental stage occupants. Prohibiting passage of the probe is intended to prevent the torso of the occupant from sliding through a side or leg opening. The design of current bath seats can be modified to eliminate openings that are large enough for an infant to slide through, for example by adding more vertical "bars" or increasing the width of existing "bars." [2&4]