

under the proposed definition of "bath seat" if they were to be re-introduced into the U.S. market.[2] As used in this NPR, the term "bath seat" includes bath rings.

Current bath seats provide a molded plastic seat for the infant to sit on. They provide support to a seated infant. In addition, there are now some infant bathtubs that convert to bath seats. These convertible bath seats would also be included in the proposed rule's definition of "bath seat" because, in the bath seat configuration, they provide support to the front and back of a seated infant.[2]

The traditional infant bath tubs that are used to bathe a reclining infant are not within the scope of the proposed rule. Essential to the proposed definition of "bath seat" is that the item provides support at least to the back and front of an infant in a seated position. Although there have been drowning incidents involving infant bath tubs, the hazard scenarios are different from incidents involving bath seats. The bath tub incidents do not involve tipovers, leg opening entrapments and children coming out of the products as the bath seat incidents do.

Bath seats are produced and/or marketed by juvenile product manufacturers and distributors. At the present time, there are two manufacturers and one importer of bath seats active in the U.S. market.[2&8]

In 2000, the Juvenile Products Manufacturers Association ("JPMA") estimated that there may be up to two million bath seats in use. This is generally consistent with an estimate derived from the American Baby Group's *Baby Products Tracking Study*, 2000. According to the Tracking Study, about 33 percent of new mothers own bath seats or rings. Given the approximately four million annual births in the U.S., the 33 percent ownership rate suggests about 1.3 million bath seats are available for use for infants under the age of one. Including bath seats used by infants older than one, the total number of bath seats in use may be close to two million, as estimated by JPMA.

Retail sales of new bath seats may range from 700,000 to 1,000,000 annually. The American Baby Group survey indicated that 46 percent of bath seats or rings owned by new or expectant mothers were obtained after being used for an older child or borrowed. This suggests that about 54 percent of the bath seats were acquired new, resulting in annual sales of about 700,000 ($.54 \times 1.3$ million). The JPMA estimate of sales is somewhat higher, about 1 million annually.

Bath seats currently sell for about \$10 to \$16. Bath seats which convert from an infant bath tub to a bath seat sell for about \$20 to \$25.

D. The Risk of Injury

1. Incident Data

The Commission has reports of 106 deaths and 163 non-fatal incidents and complaints associated with bath seats between January 1983 and October 2003. One hundred-three of the deaths occurred in the absence of a caregiver. In many incidents it is difficult to know the amount of time the caregiver was out of the room. Some reasons that caregivers have cited for leaving children unattended are answering unexpected phone calls, retrieving towels, tending to another child in the home, performing household chores, or watching television. The victims involved in fatal drowning incidents ranged in age from 5 months to 20 months.[2&3]

2. Hazard Scenarios

After examining the bath seat incident reports, the Commission staff identified three major hazard scenarios that were related to the bath seats' design and materials. These are: (1) The bath seat tipping over during use; (2) the child coming out of the bath seat; and (3) the child becoming entrapped and/or submerged in the leg openings of the bath seat.[2&3]

Bath seat tipping over. The staff identified 32 fatalities and 85 non-fatal incidents or complaints involving bath seats tipping over that were reported from January 1983 through October 2003. The children involved ranged from 4 months to 15 months in age. In most of the fatal incidents, a caregiver was not present. However, a caregiver was present in two of the fatalities. The majority of non-fatal incidents were supervised.[2&3]

In many of the tip-over incidents, it appears that the suction cups may not have completely adhered to the tub's surface. It is often difficult to determine the type of surface involved in individual incidents.[2]

Child coming out of bath seat. The staff identified 22 fatalities and 13 non-fatal incidents and complaints involving children coming out of bath seats that were reported from January 1983 through October 2003. In these incidents, the children were found out of the bath seat in the bath water, and the bath seat was still in its upright position. The scenario suggests that the bath seat was unable to restrain the child in the seat. Children involved in these incidents ranged in age from 6

months to 14 months. In all of the fatal incidents and in the majority of non-fatal incidents no caregiver was present.[2&3]

Entrapment and submersion. The staff identified 3 fatalities and 18 non-fatal incidents and complaints involving children entrapped or submerged in bath seats that were reported from January 1983 through October 2003. The children involved in these incidents ranged in age from 3 to 16 months. In one of the fatalities the child was supervised. In the other two, no caregiver was present. The majority of non-fatal incidents were supervised.[2&3]

E. Voluntary Standard

Currently, there is a voluntary standard for bath seats, ASTM F 1967-03. The standard was first published in June 1999. At that time, the standard included marking, labeling, and literature requirements as well as performance requirements addressing stability, static load, latching/locking mechanisms, restraint systems, leg opening sizes and other requirements commonly found in juvenile product standards. A revised standard with requirements for suction cup integrity and a durability requirement for latching/locking mechanisms was published in June 2001. The current version of the standard, ASTM F 1967-03, contains additional revisions that were approved in March 2003 and published in April 2003.[2]

Following is a summary of the performance requirements and their respective test methods specified in ASTM F 1967-03.[2]

Restraint System: If the seat provides back support and side or front support, then a passive crotch restraint must be provided. The ASTM standard does not allow additional restraints that require any action on the part of the caregiver to secure the restraint.

Stability: The bath seat is tested on a smooth surface, in 2 inches of water. A 17-pound force (lbf.) is applied horizontally from the seat. The bath seat complies with the voluntary standard if it does not tip over. Testing is not required on slip-resistant surfaces unless the manufacturer recommends use on slip-resistant surfaces (the Commission is unaware of any bath seats currently sold that are recommended for slip-resistant surfaces).

Static Load: A 30-pound load is placed in the seat for 20 minutes. There shall be no breakage or deformation of the product.

Requirements for Suction Cups (added in 2001): Seats with suction cups