



UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

This document has been electronically
approved and signed.

BALLOT VOTE SHEET

DATE: November 2, 2011

TO: The Commission
Todd A. Stevenson, Secretary

THROUGH: Cheryl A. Falvey, General Counsel
Kenneth R. Hinson, Executive Director

FROM: Mary A. House, General Attorney, RAD

SUBJECT: Staff update on ASTM F 1427, *Standard Consumer Safety Specification for Bunk Beds*, pertaining to Petition CP 10-2 & HP 10-1, Petition for Change to the Bunk Bed Standard

BALLOT VOTE Due: _____ November 8 _____, 2011

On April 6, 2011, CPSC staff forwarded a briefing package to the Commission regarding a petition to initiate rulemaking to revise the current regulations for bunk beds, referred to collectively as the "Bunk Bed Standard," to incorporate requirements for head and neck entrapment testing in spaces created by side structures, such as ladders, that are provided with the bunk bed (Petition CP 10-2 under provisions of the Consumer Product Safety Act (CPSA) and as Petition HP 10-1 under provisions of the Federal Hazardous Substances Act (FHSA)). On April 12, 2011, the Commission voted unanimously to defer its decision on the petition for 6 months and directed staff to work with the ASTM F15.30 Subcommittee on Bunk Beds (Bunk Bed Subcommittee) to develop requirements that would address head and neck entrapments in side structures. Attached is the staff's update on the progress of the Bunk Bed Subcommittee toward implementing a revised voluntary standard. Based on the work of the Bunk Bed Subcommittee, CPSC staff recommends that the Commission defer its decision on the petition for an additional 6 months and direct staff to continue participating with the Bunk Bed Subcommittee to develop requirements in the ASTM F 1427 voluntary standard that would address head and neck entrapments in side structures.

Please indicate your vote on the following options:

I. Grant the petition.

(Signature)

(Date)

(a) Direct staff to draft an Advance Notice of Proposed Rulemaking.

(Signature)

(Date)

(b) Direct staff to draft a Notice of Proposed Rulemaking.

(Signature)

(Date)

II. Defer the petition for an additional 6 months and, at the end of the 6-month period, direct staff to update the Commission on the progress of standards developments in ASTM F1427 for head and neck entrapment in spaces created by side structures, such as ladders, that are provided with the bunk bed.

(Signature)

(Date)

III. Deny the petition.

(Signature)

(Date)

IV. Take other action (please specify).

(Signature)

(Date)

Attachment: Staff update on ASTM F 1427, *Standard Consumer Safety Specification for Bunk Beds*, pertaining to Petition CP 10-2 & HP 10-1, Petition for Change to the Bunk Bed Standard



UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
BETHESDA, MD 20814

This document has been electronically
approved and signed.

DATE: October 19, 2011

MEMORANDUM

TO: The Commission
Todd A. Stevenson, Secretary

THROUGH: Cheryl A. Falvey, General Counsel
Kenneth R. Hinson, Executive Director
Robert J. Howell, Deputy Executive Director for Safety Operations

FROM: DeWane Ray, Assistant Executive Director,
Office of Hazard Identification and Reduction

Timothy P. Smith, Project Manager,
Division of Human Factors, Directorate for Engineering Sciences

SUBJECT: Staff update on ASTM F 1427, *Standard Consumer Safety Specification for Bunk Beds*, pertaining to Petition CP 10-2 & HP 10-1, Petition for Change to the Bunk Bed Standard

This memorandum updates the Commission on the progress of the ASTM International¹ (ASTM) F15.30 Subcommittee on Bunk Beds (the "Bunk Bed Subcommittee") in addressing the concerns raised by Petition CP 10-2 & HP 10-1, Petition for Change to the Bunk Bed Standard, through revisions to the voluntary standard for bunk beds, ASTM F 1427, *Standard Consumer Safety Specification for Bunk Beds*.

BACKGROUND

PETITION INFORMATION

In correspondence dated April 16, 2010, Carol Pollack-Nelson, Ph.D., of Independent Safety Consulting (the "petitioner"), requested that the Commission initiate rulemaking to revise the current U.S. Consumer Product Safety Commission (CPSC) regulations for bunk beds, referred to collectively as the "Bunk Bed Standard," to incorporate requirements for head and neck entrapment testing in spaces created by side structures, such as ladders, that are provided with the bunk bed. On June 24, 2010, the CPSC's Office of the General Counsel docketed the request for rulemaking as Petition CP 10-2 under provisions of the Consumer Product Safety Act (CPSA) and as Petition HP 10-1 under provisions of the Federal Hazardous Substances Act (FHSA).

¹ ASTM International was known formerly as the American Society for Testing and Materials.

RELEVANT STANDARDS

The Bunk Bed Standard requires that bunk beds be tested for entrapment hazards in the upper-bunk guardrails, between the guardrails and the upper-bunk mattress foundation, and in the end structures of the bunk bed, using a wedge block that simulates the torso of a small 2-year-old child. During testing, the wedge block must not pass freely through any opening in the upper-bunk end structure or in any space between the uppermost member of the upper-bunk guardrail and the underside of the upper bunk's foundation. The wedge block may pass freely through an opening in the lower-bunk end structure, but only if that opening also permits passage of a 9-inch diameter rigid sphere, which simulates the head of a 5-year-old child.

The ASTM voluntary standard on bunk beds, ASTM F 1427, *Standard Consumer Safety Specification for Bunk Beds*, contains additional requirements for the design and performance of bunk beds and has incorporated the performance requirements specified in the Bunk Bed Standard for head entrapments in guardrails and end structures. However, like the Bunk Bed Standard, the voluntary standard does not include performance requirements intended to address entrapments in side structures other than upper-bunk guardrails. This standard was developed by the ASTM F15.30 Subcommittee on Bunk Beds (the "Bunk Bed Subcommittee"). In response to the petition, the Bunk Bed Subcommittee formed a task group charged with recommending revisions to ASTM F 1427 to address the concerns raised by the petition.

CPSC STAFF BRIEFING PACKAGE AND RECOMMENDATION

On April 6, 2011, CPSC staff forwarded a briefing package to the Commission for consideration. As described in that package, staff identified eight incidents during a 17-year period that appeared to be within the scope of the petition, in that they involved head or neck entrapment in a bunk bed side structure that currently is not required to be tested for entrapment by the Bunk Bed Standard. These eight incidents resulted in four fatalities and one minor injury. Staff's review of the incidents concluded that two fatalities, one injury, and two of the incidents without injury, most likely would have been prevented had the provisions proposed in the petition been in the Bunk Bed Standard. The remaining three incidents involved children younger than 2 years old, which is the lower end of the age range for which the entrapment probes in the Bunk Bed Standard are designed. However, because the current entrapment probes are designed based on the anthropometric dimensions of the smallest 2-year-olds, staff believes that some of the incidents involving these younger children also might have been prevented if entrapment provisions for side structures had been in the Standard.

At the conclusion of the briefing package, staff recommended that the Commission defer its decision on the petition for 6 months and direct staff to work with the Bunk Bed Subcommittee to develop requirements that would address head and neck entrapments in side structures. Staff stated in the briefing package that if the Commission voted to defer its decision, staff would provide the Commission with an update on the progress of the voluntary standard in 6 months, at which time the Commission could make a determination to continue to defer its decision on the petition and proceed with the voluntary standards process, or pursue other Commission action. On April 12, 2011, the Commission voted unanimously (5–0) to defer its decision on the petition for 6 months and directed staff to work with the Bunk Bed Subcommittee to develop requirements that would address head and neck entrapments in side structures.

DISCUSSION

ASTM F15.30 BUNK BED SUBCOMMITTEE ACTIVITIES

On May 25, 2011, CPSC staff attended a meeting of the Bunk Bed Subcommittee, during which the Subcommittee discussed revisions to ASTM F 1427 that are intended to address the hazard identified in the petition. During the meeting, the Bunk Bed Subcommittee developed the following proposed entrapment provisions for appropriate sections of the voluntary standard:

- Testing for entrapment using the wedge probe and 9-inch sphere now will be applied to the entire boundary of the bunk bed, between the lower-bunk foundation and the upper-bunk foundation, rather than to the end structures only.
- Testing for entrapment using the wedge probe and 9-inch sphere will be applied between all ladder structures, including ladder steps or rungs.
- Testing for entrapment using the wedge probe and 9-inch sphere will be applied between ladder steps, or rungs, and the upper-bunk boundary.
- For ladders attached to the side of a lower bunk, there must be no gaps between the portion of the manufacturer's recommended mattress height above the side rail and the interior vertical stiles² between 1.88 inches and 9 inches. In other words, these gaps must be greater than 9 inches or less than 1.88 inches. The 1.88-inch measurement is based on child anthropometric data and the compressibility of the neck, and it is the relevant dimension used in the Bunk Bed Standard's neck entrapment probe. The 9-inch measurement is based on the 9-inch sphere that is used in the Bunk Bed Standard and elsewhere in the voluntary standard for entrapment testing.

The Bunk Bed Subcommittee's proposed entrapment provisions for ladders and other side structures appear to meet or exceed the requirements that the petitioner asked to be incorporated into the Bunk Bed Standard. Thus, if accepted, the proposed revisions to ASTM F 1427 most likely would address the same fatalities and injuries that would have been addressable through the requested rulemaking. At the conclusion of the Bunk Bed Subcommittee meeting, the Subcommittee voted to ballot the proposed revisions to ASTM F 1427.

The revised standard has been submitted to ASTM for ballot, and the results of the ballot will be reviewed by the Bunk Bed Subcommittee during its next meeting in November 2011. Assuming that there are no negative votes, the revised standard can be published after that meeting. If the ballot receives any negative votes that the Subcommittee finds persuasive, the standard would have to undergo additional revisions and be rescheduled for a ballot vote; this most likely would result in an additional 6-month delay before a revised standard is published.

² The vertical stiles are the vertical, or upright, components of the ladder.

STAFF RECOMMENDATION

The Bunk Bed Subcommittee appears to be making significant progress on revising the ASTM F 1427 voluntary standard for bunk beds to address the concerns raised by Petition CP 10-2 & HP 10-1, Petition for Change to the Bunk Bed Standard. Therefore, CPSC staff recommends that the Commission defer its decision on the petition for an additional 6 months and direct staff to continue participating with the Bunk Bed Subcommittee to develop requirements in the ASTM F 1427 voluntary standard that would address head and neck entrapments in side structures. If the Commission votes to defer its decision for 6 months, at the end of the 6-month period, staff will provide the Commission with a final recommendation on the petition or an update on the progress of the voluntary standard. At that time, the Commission again could determine the appropriate Commission action.