

**LOG OF MEETING  
DIRECTORATE FOR ENGINEERING SCIENCES**

**SUBJECT:** ASTM F15.77 Subcommittee Meeting - Draft Standard for Marketing & Labeling Magnet Sets Containing Small Loose, Powerful Magnets with a Flux Index  $\geq 50$

**DATE OF MEETING:** April 7, 2020 1:00pm, ET

**LOG ENTRY SOURCE:** Stephen Harsanyi (ESHF)

**DATE OF LOG ENTRY:** April 8, 2020

**LOCATION:** Teleconference

**CPSC ATTENDEE(S):** Benjamin Mordecai (LSM), John Stabley (HSPP), Patricia Edwards (EXHR), Sandra Inkster (HSPP), Susan Bathalon (EXHR), Stephen Harsanyi (ESHF), and Timothy Smith (ESHF).

**NON-CPSC ATTENDEE(S):** Contact ASTM for the attendee list.

**Summary of meeting:**

The subcommittee made changes to the draft standard regarding the permanent storage container and magnet ingestion hazard pictogram. The subcommittee discussed possible performance requirements and methods for magnet identification, both of which are unresolved at this time.

*Permanent Storage Containers*

Prior to the meeting, the subcommittee made changes to the permanent storage container requirements (sections 9.2.2 and 9.2.3), based on the recommendations from the permanent storage container task group. These changes included the following:

- Revisions to one of the packaging options to require a greater opening force to account for older children, based on the strength of children 37 to 96 months of age.
- Removal of one of the packaging options, which allowed for a package that, in order to open, required the cognitive understanding of a manipulative concept beyond the ability of a child younger than 3 years.
- The addition of testing requirements to confirm that the opening feature of the permanent storage container remains effective for at least 200 open and close cycles, spaced 10 seconds apart.

The subcommittee discussed the minimum open-close cycle count of 200. The count was based on results from a voluntary feedback survey of 281 users, conducted by one subcommittee member (a manufacturer). The count approximated the number of cycles that about 80 percent of respondents believed they would open and close a child-resistant container. CPSC staff voiced concern that the cycle count was based on a convenience sample, and that the respondents should have been asked how often they accessed their magnets, rather than how many times they expected they would open and close a child-resistant storage container over an unspecified amount of time. Staff also pointed out that the survey showed that most people would either not use the child resistant container, or very infrequently use the child resistant container. The subcommittee member noted that only a minority of respondents had children (25.6%), and also explained that child resistant features act as an “active acknowledgment warning”; a physical

reminder that the product poses a hazard. The subcommittee agreed to change the open-close cycle count to 360, which was closer to the 95<sup>th</sup> percentile value of the survey responses.

### *Magnet Ingestion Hazard Pictogram*

The subcommittee reviewed a magnet ingestion hazard pictogram provided by CPSC staff. The pictogram was created for the CPSC by a contractor and later modified by staff in an attempt to address comprehension concerns identified by the contractor. The pictogram shows a human figure ingesting magnets with a circle and cross through the action. The pictogram also includes arrows demonstrating travel of the magnets into the intestines, and arrows showing the magnets attracting through the intestines.

### *Performance Requirements*

Dr. Bryan Rudolph presented a motion to add performance requirements to the draft standard. Specifically, he requested that magnets from “Adult” magnet sets must either: (1) be too large to fit within the small parts cylinder, or (2) have a flux index less than 50. A preliminary vote was taken of voting members, resulting in 8 votes in favor of the motion (including CPSC staff) and 11 votes against. The voting on the motion will continue until April 10, 2020, because not all voting members had an opportunity to vote in this meeting.

Members who voted *against* performance requirements made claims including:

- Warnings, instructions, marketing, and packaging requirements can address the hazard adequately.
- Warnings, including public outreach, have been effective, and the continuing upward trend in incidents is due to “bad actors” (e.g., products with no warnings) and inadequate regulation of magnet sets marketed as children’s toys.
- Performance requirements would make this standard redundant with ASTM F963, *Standard Consumer Safety Specification for Toy Safety*; such redundancy would make this standard unnecessary. The requirements could also introduce conflict between the standards.
- Performance requirements significantly harm the utility of the product, so it is unlikely that manufacturers will conform to such a standard. Manufacturers at the meeting stated that they will leave the subcommittee if performance requirements are added to the standard. ASTM staff explained that the subcommittee would cease activity if less than three producers remain on the subcommittee.
- More data is required to prove that performance requirements are the only way to address the hazard effectively, and that the requested performance requirements are appropriate.
- It is more important to get some requirements out now and see if they are effective.

Members who voted *in favor* of performance requirements made claims including:

- The only way to address the hazard adequately is to prevent the hazard. Requirements for warnings, instructions, marketing, and packaging place the onus on the caregivers to keep the magnets away from more vulnerable populations.

- Standards can and do overlap in requirements (*e.g.*, current regulations for bunk beds intended primarily for children and bunk beds not intended primarily for children), and this standard is for “Adult” magnet sets, whereas ASTM F963 is for children’s toys.
- Delaying performance requirements to see if warnings will be effective is not an effective public health policy.
- The available incident data demonstrate that warnings, instructions, marketing, and packaging requirements, alone, are ineffective methods of addressing the hazard: (1) victims accessed magnets typically from magnet sets absent warnings, instructions, marketing, and packaging, such as receiving loose magnets from friends; (2) incidents included products with warnings, instructions, and marketing similar to those proposed in the draft standard; and (3) the majority of incidents have involved children 5 years or older, making child resistant packaging inherently fallible.

Members for and against performance requirements both explained that the CPSC generally relies on voluntary standards before mandating standards, and therefore the requirements in this standard could become enforceable in the future.

#### *Methods for Magnet Identification*

The subcommittee discussed ways to identify individual magnets from magnet sets, such as with laser etching. Those in favor of such an approach explained that individual magnet identifiers would address the common difficulty of identifying magnets involved in magnet ingestion incidents, resulting in more accurate data. Those against the approach voiced concerns regarding the cost of such a process, and that the subcommittee should not delay the standard. A concern was raised that if such markings were required, unscrupulous suppliers might produce products with counterfeit markings. Subcommittee members will investigate the actual costs and feasibility and report back to the subcommittee.

#### **Next Steps:**

CPSC staff will determine if the pictogram, which was developed by a contractor for CPSC and modified by staff, can be used by ASTM in this standard. Voting on the motion to add performance requirements to the draft standard will continue until April 10, 2020. The subcommittee plans to ballot the revised draft standard in the near future.