

## **LOG OF MEETING DIRECTORATE FOR ENGINEERING SCIENCES**

**SUBJECT:** ASTM F15.77 Subcommittee on Magnets; Meeting of the Task Group on Performance Requirements

**DATE OF MEETING:** June 17, 2021 11:00am, ET

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

**DATE OF LOG ENTRY:** June 23, 2021

**LOCATION:** Teleconference

**CPSC ATTENDEE(S):** Stephen Harsanyi (ESHF), Caroleene Paul (ESMC), and Patricia Edwards (EXHR).

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

### **Summary of Meeting:**

The subcommittee commenced its first task group meeting on performance requirements since ASTM published the new standard specification, F3458 – 21, for Marketing, Packaging, and Labeling Adult Magnet Sets Containing Small, Loose, Powerful Magnets (with a Flux Index  $\geq 50 \text{ kG}^2 \text{ mm}^2$ ).

The task group discussion included the following topics:

- If adding performance requirements, whether to add the requirements to the existing standard, F3458, or to a new, separate standard. CPSC staff supported recommendations from other attendees to add performance requirements to the existing standard (no consensus reached).
- Implications of creating performance requirements that align with CPSC's remanded rule. CPSC staff supported recommendations from other attendees to align with the remanded rule and continue investigating the test methods (no consensus reached).
- Adequacy of the test methods specified in ASTM F963 for identifying a magnet as hazardous. CPSC staff agreed with other attendees that the test methods in ASTM F963 should be refined, particularly regarding: (1) locating the maximum flux density of small (e.g., 2.5 mm diameter) magnets, and (2) strengthening and clarifying pass/fail criteria (including number of magnets to test). However, CPSC staff also agreed with several other attendees that investigating methods by which to further improve the methodology in ASTM F963 should not delay incorporating the ASTM F963 requirements, which would address the vast majority of magnets identified in incident reports. The task group considered the correlation between ASTM F963's incorporation of performance requirements and the significant reduction in magnet ingestion injuries involving children's toys.
- Considerations and potential test methods to account for various magnet properties. Attendees discussed numerous factors that affect whether ingested magnets will attract internally through bodily tissue and resist natural bodily forces to separate; this discussion included how the addition of magnets can increase the force imposed on the trapped tissue, and the force required to separate the magnets. CPSC staff agreed that

future testing should be conducted to confirm the most effective method by which to identify hazardous magnets, but that this testing should not delay aligning with the remanded rule.

- Consequences of performance requirements on product utility. Several attendees raised concern that adult magnet sets will lose important utility if flux index requirements are added to the standard. This discussion included loss of educative utility. Other attendees suggested that exceptions can be made in the standard to account for magnets used in schools and universities. A discussion then followed about the prevalence of magnet ingestion incidents involving magnets at school, and whether the source of the magnets could be tied to the schools as opposed to students who brought them to school. Several attendees also claimed that loss of utility would result in deterring consumers from purchasing magnet sets that meet the standard; claiming that consumers would turn to hazardous magnet sets from overseas, which are more likely to market to children and are more difficult to be enforced by the CPSC.
- Effectiveness of safety messaging requirements. One attendee explained that the subcommittee determined by consensus to use safety messaging requirements and not performance requirements. CPSC staff responded that the past ASTM F15.77 efforts were framed under the concept of “something is better than nothing,” and that the subcommittee planned to continue working to improve the standard to adequately address the magnet ingestion hazard.<sup>1</sup>

### **Next Steps:**

The task group plans to meet again and continue the above discussions. CPSC staff recommended encouraging test labs to participate in the next meeting.

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<sup>1</sup> Note: this task group was initiated based on 15 subcommittee member votes in favor of forming the task group and only three opposed (subcommittee meeting on May 25, 2021).