

***American Academy of Pediatrics * Consumer Federation of America *
Consumer Reports * Kids In Danger * National Center for Health Research *
* U.S. Public Interest Research Group ***

November 14, 2024

Office of the Secretary
Consumer Product Safety Commission
4330 East West Highway
Bethesda, MD 20814

**Joint Comments to the Consumer Product Safety Commission on the
Safety Standard for Toys Containing Button Cell or Coin Cell Batteries
Docket No. CPSC-2024-0023**

Our coalition of medical, public health, and consumer organizations welcomes the opportunity to submit the following comments to the Consumer Product Safety Commission (CPSC or Commission) regarding the agency’s notice of proposed rulemaking to establish a safety standard for toys containing button cell or coin cell batteries.¹ We commend the CPSC’s work on the proposed safety standard and submit to the agency the following comments.

Button cell and coin cell batteries are ubiquitous and useful, powering a range of common items such as toys, tools, remote control devices, garage door openers, bathroom scales, flameless candles, watches, cameras, hearing aids, and digital thermometers. However, button cell and coin cell batteries pose significant risks, particularly for children, necessitating specific protections.

When ingested, button cell and coin cell batteries can obstruct a child’s airway or esophagus, leading to choking hazards. Ingestion may also lead to chemical hazards in the child’s airway or esophagus, resulting in life-threatening burns, perforations, or necrosis of the child’s soft tissue. These batteries can even erode soft tissue all the way to the aorta, the largest artery in the body, resulting in massive hemorrhaging and death. Chemical burns from the ingestion of these batteries can also result in extensive internal tissue damage throughout the digestive tract.

Symptoms of ingestion in children are often overlooked because the symptoms mimic other common conditions, such as croup, colds, or viral illnesses with vomiting (known colloquially as “stomach flu”). In addition, given their ubiquity, these batteries are often ingested without adult awareness of the button cell or coin cell battery’s accessibility. Parents unaware of the battery ingestion may not be able to provide a physician with a complete history, which may delay diagnosis or result in a misdiagnosis.² The children who ingest these batteries may not be

¹ Consumer Product Safety Commission, “Safety Standard for Toys: Requirements for Toys” (Feb. 2023) (online at: www.regulations.gov/document/CPSC-2023-0004-0001).

² Healthychildren.org, “How small batteries can become dangerous to children,” (Sept. 28, 2021) (online at: www.healthychildren.org/English/safety-prevention/at-home/Pages/Button-Battery-Injuries-in-Children-A-Growing-Risk.aspx).

old enough to verbally express they ingested the battery. Older children, who know they are not supposed to ingest these, may not want to tell the adult to avoid getting into trouble. Consequently, every year, children are at risk of serious, life-threatening injuries due to undetected battery ingestion. It is critical to ensure that the toys that children are most likely to interact with regularly meet strong standards and are designed to keep button cell and coin cell batteries out of children's hands.

Our coalition was proud to support Reese's Law, which Congress passed in 2022 to protect children against hazardous button cell and coin cell battery ingestion.³ This bipartisan law requires the CPSC to promulgate a safety standard for button cell and coin cell batteries and consumer products containing button cell or coin cell batteries. Reese's Law excluded toys already compliant with the CPSC's current safety standards pursuant to 16 CFR part 1250. The CPSC now proposes amendments to part 1250, aiming to align its requirements more closely with its safety standard for button cell or coin batteries and consumer products containing such batteries. These proposed performance and labeling requirements for toys containing these batteries will help mitigate the risk of children accessing button cell or coin cell batteries in the first place, which will prevent serious and even life-threatening injuries.

Performance Requirements

Our groups support the CPSC's proposed rules for performance requirements for toys containing button cell or coin cell batteries, as the measure will significantly reduce the risk of serious injury and death to children.

The CPSC must periodically review and revise rules for children's toys to ensure the rules provide the highest level of safety that is feasible.⁴ The agency is also tasked with promulgating safety standards for toys that are more stringent than ASTM F963 if the Commission determines more stringent standards would reduce the risk of injury.⁵ For these proposed requirements, CPSC staff has assessed that a higher level of safety is feasible for toys containing button cell or coin cell batteries and would further reduce the risk of injury. As such, the proposal includes performance requirements and test methods for captive fasteners, minimum battery compartment threaded attachments, and sequential use and abuse test requirements to address the hazards identified in the incident data. Below we address the need for the proposed changes.

1. Captive Fasteners

Our groups support the more robust proposed test method for captive fasteners. A significant hazard to children is the potential removal or loosening of fasteners securing battery compartments, allowing easier access to batteries. Captive fasteners will also ensure that the children will not have access to any loose fasteners or screws that could be ingested and put children at risk of choking or another hazard. Moreover, a missing fastener is not likely to be replaced, which may make it easier for a child to access the battery inside the compartment. The

³ Reese's Law, 15 U.S.C. 2056e (Aug. 16, 2022).

⁴ 15 U.S.C. 2056b(c).

⁵ 15 U.S.C. 2056b(b)(2)(B).

ASTM F963-23 test method only requires visual inspection of fasteners to verify the fastener remains attached to the toy or battery compartment cover. In contrast, section 13.4.6 of IEC 62115 requires testing with a force of 20 N applied to the screw or fastener for a duration of 10 seconds in any direction. CPSC proposes incorporating the IEC requirement and establishing a minimum threshold of attachment force. As such, we agree that the proposed changes will reduce the risk of injury or death to children because they will mitigate the accessibility of button cell or coin cell batteries.

2. Minimum Battery Compartment Threaded Attachment Requirements

Our groups also support adding performance requirements for threaded attachments that address a significant hazard to children when screws or fasteners are too short to remain attached or the threaded component is not engaged. When the screws intended to keep the door or cover secure are too short or do not engage the threads, the battery compartment may be easily opened with minimal effort and may allow children easier access to batteries contained in the compartment. Currently, ASTM F963-23 does not include any performance requirements addressing fastener length or removal torque. In contrast, section 5.5(a) of UL 4200A-23 provides requirements for threaded fastener securement and twist-on battery compartment cover securement. We agree with the CPSC proposal incorporating requirements consistent with the UL 4200A-23 provisions that will ensure toy battery compartment fasteners are secure, sufficient length, and cannot be easily opened with minimal force.

3. Sequential Use and Abuse Test

Our groups strongly support the proposed sequential use and abuse test requirements. These proposed requirements will help to ensure that batteries remain inaccessible to children during the reasonably foreseeable use and misuse of toys. We agree that the proposed series of tests will help to address the number of factors that impact the integrity of a toy's battery compartment.

The ASTM F963-23 standard does not require sequential testing on battery-operating toy samples for most of its tests. CPSC proposes to require sequential use and testing for toys similar to section 6 of UL 4200A-23, which requires that products containing button cell or coin cell batteries have all use and abuse tests conducted sequentially on the same sample. Sequential testing better addresses known hazard patterns for children and is more comprehensive because each test can affect subsequent testing. We also agree that sequential testing would better reflect real-world interactions that these toys may encounter and help mitigate risks to children. We strongly support the proposed sequence of tests and agree that each test would help to reduce access and help address the risk of ingestion and insertion of button cell and coin cell batteries found in toys.

a. Stress Relief Test

Our groups support the proposed stress relief test that will help better mimic real-world conditions and ensure that the battery compartment on toys can withstand use and abuse testing, including the proposed drop, impact, and crush tests, with little to no effect on the compartment's

integrity. The proposed test method based on UL 2400A-23 that also incorporates clarifications based on a similar test in IEC 62368-1:2023 would help to adequately precondition battery compartments in toys and help to ensure that these compartments remain secure.

b. Battery Replacement Test

Our groups also support the battery replacement test, which addresses the hazard of compartments becoming unsecured after replacing a battery. The repeated opening and closing of a battery compartment can reduce the compartment's ability to lock securely or can strip the threads of the fastener. ASTM F963-23 does not require any simulated battery replacement tests. We support the CPSC's proposal to incorporate section 6.2.1b of UL 4200A-23 which requires battery compartments to be opened, batteries to be removed and replaced, and the battery compartment closed and secured ten times. This will mitigate the risk of battery compartments becoming unsecured after the battery is replaced.

c. Drop Test and Tip Over Test & Impact Test

Our groups support the agency's proposed test combining elements from both UL 4200A-23 and ASTM F963-23 drop tests. The CPSC's proposed test would ensure that toys would be subject to the highest degree of scrutiny that would help to ensure the greatest level of safety. We also support the CPSC's proposed test that simulates impacts directly to the toy battery compartment and adopts the more stringent impact test in a number of voluntary standards, including UL 4200A-23. At least 50 nonfatal incidents have occurred where a toy's battery compartment broke apart or opened unintentionally. The CPSC notes that nine of these nonfatal incidents involved the toy being dropped, and another two of these nonfatal incidents involved the toy being thrown or smashed. In light of these reported incidents, these proposed tests are necessary to help further prevent children from accessing button cell and coin batteries in these toys.

d. Crush Test

Our groups support the proposed test that would adopt a stringent crush test for all toys that would be subject to this rule. Such a test would help address incidents involving crushing forces exerted on toys during normal use and abuse and help ensure button cell and coin batteries remain inaccessible. By adopting the crush test in UL 4200A-23, toys would have to withstand greater force that better simulates the crushing force of a child or adult stepping or sitting on the toy and help to ensure that it will not split open and allow access to the battery.

e. Torque, Tension, and Compression Tests

Our group also supports the CPSC's proposed torque, tension, and compression tests that would help to address the hazard of children manipulating a toy with their hands or mouth to open the battery compartment. With nine nonfatal incidents reported, it is critical to ensure that children cannot open the battery compartment through such manipulation. We support the proposed tests using the higher forces and torques used in the UL 4200A-23 tests and agree that

it will better ensure the integrity of the battery compartment than the current ASTM F963-23 tests.

f. Compliance Verification Test

Our groups support the proposed updates to the proposed test that would address incidents of children gaining access to button cell or coin cell batteries from toy battery compartments without the use of a tool. The proposed test would incorporate an accessibility probe used in UL 4200A-23 to help ensure that toy compartments stay intact and remain secure. We agree that this proposed test would address the potential hazards identified in the CPSC’s data and help reduce the risk of injury from button cell or coin cell batteries, keeping them better contained and out of children’s hands.

Marking, Warning, Labeling, and Instructional Literature Requirements

Our groups support proposed changes that will require more stringent warnings for battery-operated toys. A 2021 report from the CPSC showed an alarming 93% increase in emergency room-treated injuries related to button batteries among children ages five to nine years from March through September 2020.⁶ Every button cell or coin cell battery should come with warning labels that send clear, conspicuous, and consistent messages to consumers.

While we are in support of the proposed warning label revisions, our organizations continue to stress that warning labels and instructions are not a substitute for safe product design. Rather, warning labels and instructions should supplement the proposed rule’s requirements and tests.

Conclusion

In summary, the undersigned organizations support the CPSC’s proposed safety standard, which will help to protect children from the risk of serious injury or death from insertion or ingestion of button cell or coin cell batteries. Our coalition calls on manufacturers to continue their efforts to apply design changes that would make these batteries less accessible to children and help prevent serious injury or death from button cell or coin cell battery ingestion.

The CPSC should finalize the proposed rule expeditiously and apply an effective date that is as early as possible and not more than 180 days after the publication of the final rule. In 2023, our groups submitted joint comments on the CPSC’s proposed Safety Standard and Notification Requirements for Button Cell or Coin Batteries and Consumer Products Containing Such Batteries and noted that the “[ASTM] Toy Standard subcommittee should incorporate other requirements outlined in Reese’s Law.”⁷ While not subject to Reese’s Law, toy manufacturers have been aware of the law and the resulting safety standard finalized in 2023. With sufficient

⁶ CPSC, “Effect of Novel Coronavirus Pandemic on Preliminary NEISS Estimates,” (Mar. 4, 2021) (online at: www.cpsc.gov/Newsroom/News-Releases/2021/Hospital-Emergency-Room-Treatment-for-Some-Product-Related-Injuries-Rose-During-the-Pandemic-Even-as-Overall-ER-Visits-Dropped), *see also* CPSC, “Fact Sheet: Consumer Product Injuries during the COVID-19 Pandemic” (online at: www.cpsc.gov/s3fs-public/ConsumerProductInjuriesCOVID19pandemic.pdf).

⁷ Regulations.gov, “Comment from AAP, CFA, CR, KID, Public Citizen, and U.S. PIRG” (Mar. 13, 2023) (online at: www.regulations.gov/comment/CPSC-2023-0004-0042).

information to be put on notice, it can be reasonably expected for manufacturers to engage in efforts to meet the proposed requirements.

Exposure to button cell or coin cell batteries from unsecured battery compartments on battery-operated toys presents a risk of injury and death to children. Although the proposal adds performance requirements, the methods and test equipment needed are consistent with methods and requirements used for other battery-operated consumer products.

Thank you for your consideration of our comments. We look forward to continuing to work with the CPSC and all stakeholders to ensure that children are protected from button cell or coin cell battery ingestion.

Respectfully submitted,

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