

## CONSUMER PRODUCT SAFETY COMMISSION

### 16 CFR Parts 1112 and 1263

[CPSC Docket No. 2023–0004]

#### Safety Standard and Notification Requirements for Button Cell or Coin Batteries and Consumer Products Containing Such Batteries

**AGENCY:** Consumer Product Safety Commission.

**ACTION:** Notice of proposed rulemaking (NPR).

**SUMMARY:** As required by Reese’s Law, to eliminate or adequately reduce the risk of injury from ingestion of button cell or coin batteries by children 6 years old and younger, the U.S. Consumer Product Safety Commission (CPSC or Commission) proposes a rule to establish performance requirements for battery compartments on consumer products that contain, or are designed to use, one or more button cell or coin batteries. The proposed rule also requires warning labels on the packaging of button cell or coin batteries, as well as on the packaging, battery compartments, and accompanying instructions and manuals of consumer products containing button cell or coin batteries. In addition to implementing Reese’s Law, the proposed rule requires manufacturers and importers of button cell or coin batteries, and consumer products containing such batteries, to notify consumers of performance and technical data related to the safety of such batteries at the point of sale, both online and in stores. If the rule is finalized, consumer products subject to the rule must be tested and certified as compliant with the rule.

**DATES:** Submit comments by March 13, 2023.

**ADDRESSES:** Comments related to the Paperwork Reduction Act aspects of the testing and certification, and the marking, labeling, and instructional literature requirements of the proposed mandatory standard, should be directed to the Office of Information and Regulatory Affairs, the Office of Management and Budget, Attn: CPSC Desk Officer, FAX: 202–395–6974, or emailed to [oira\\_submission@omb.eop.gov](mailto:oira_submission@omb.eop.gov).

You may submit all other comments, identified by Docket No. CPSC–2023–0004, by any of the following methods:

**Electronic Submissions:** Submit electronic comments to the Federal eRulemaking Portal at: <https://www.regulations.gov>. Follow the

instructions for submitting comments. CPSC typically does not accept comments submitted by electronic mail (email), except as described below. CPSC encourages you to submit electronic comments by using the Federal eRulemaking Portal.

**Mail/Hand Delivery/Courier/Confidential Written Submissions:** Submit comments by mail, hand delivery, or courier to: Office of the Secretary, Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814; telephone: (301) 504–7479. If you wish to submit confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public, you may submit such comments by mail, hand delivery, or courier, or you may email them to: [cpsc-os@cpsc.gov](mailto:cpsc-os@cpsc.gov).

**Instructions:** All submissions must include the agency name and docket number. CPSC may post all comments without change, including any personal identifiers, contact information, or other personal information provided, to: <https://www.regulations.gov>. Do not submit through this website: confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public. If you wish to submit such information, please submit it according to the instructions for mail/hand delivery/courier/confidential written submissions.

**Docket:** For access to the docket to read background documents or comments received, go to: <https://www.regulations.gov>, and insert the docket number, CPSC–2023–0004, into the “Search” box, and follow the prompts.

#### FOR FURTHER INFORMATION CONTACT:

Daniel Taxier, Project Manager, Division of Mechanical and Combustion Engineering, Consumer Product Safety Commission, 5 Research Place, Rockville, MD 20850; (301) 987–2211, or by email to: [dtaxier@cpsc.gov](mailto:dtaxier@cpsc.gov).

#### SUPPLEMENTARY INFORMATION:

##### I. Background and Statutory Authority<sup>1</sup>

###### A. Explanation of Reese’s Law

President Biden signed Reese’s Law, Public Law 117–171, into law on August

<sup>1</sup> On January 25, 2023, the Commission voted (4–0) to publish this notice of proposed rulemaking. Chair Hoeft-Saric and Commissioners Boyle and Trumka issued statements in connection with their vote; statements are available at: <https://www.cpsc.gov/s3fs-public/RCA-NPR-Safety-Standard-and-Notification-Requirements-for-Button-Cell-or-Coin-Batteries-and-Consumer-Products-Containing-Such-Batteries.pdf?VersionId=b9niiZNO11I3MDqWW4JRIkEcBY3Dxp3z>.

16, 2022. 15 U.S.C. 2056e. The purpose of Reese’s Law is to protect children 6 years old and younger against hazards associated with the ingestion of button cell or coin batteries. Based on a review of the medical literature, CPSC incident data, and data from the National Capital Poison Center (NCPC), an ingestion hazard is associated with swallowing or inserting a button cell or coin battery that becomes lodged (impacted) in the body (typically in the esophagus but potentially in the airways or gastrointestinal tract), which can cause death or serious injury through choking, generation of hazardous chemicals, leaking of hazardous chemicals, electrical burns, pressure necrosis (tissue damage), or other means. See Tab B of Staff’s NPR Briefing Package.<sup>2</sup>

Although this proposed rule is primarily intended to address hazards associated with oral ingestion of button cell or coin batteries by children 6 years old or younger, the performance and labeling requirements in the proposed rule will likely also reduce insertion of these batteries in the nose. The data on button cell or coin batteries demonstrate that insertions of batteries into the nose can be aspirated into the trachea and become an ingestion that lodges in the esophagus. This scenario presents the same hazard as an oral ingestion of a button cell or coin battery. Accordingly, the proposed labeling requirements include warnings regarding ingestion and insertion.

To address ingestion of button cell or coin batteries, section 2(a) of Reese’s Law requires the Commission to publish a final consumer product safety standard for button cell or coin batteries, and consumer products containing button cell or coin batteries, not later than 1 year after the date of enactment, meaning by August 16, 2023. 15 U.S.C. 2056e(a). A “button cell or coin battery” is broadly defined in section 5 of Reese’s Law as “(A) a single cell battery with a diameter greater than the height of the battery; or (B) any other battery, regardless of the technology used to produce an electrical charge, that is determined by the Commission to pose an ingestion hazard.”<sup>3</sup> Thus, the

<sup>2</sup> The information in this proposed rule is based on information and analysis provided in the January 11, 2023, Staff Briefing Package: Draft Proposed Rule to Establish a Safety Standard and Notification Requirements for Button Cell or Coin Batteries and Consumer Products Containing Such Batteries (Staff’s NPR Briefing Package), available at: <https://www.cpsc.gov/s3fs-public/NoticeofProposedRulemakingSafetyStandardandNotificationRequirementsforButtonCellorCoinBatteriesandConsumerProductsContainingSuchBatteries.pdf?VersionId=kDinNeydtkkt3T8RRtzN4u1GTXPripEL>.

<sup>3</sup> Definitions in section 5 of Reese’s Law are codified in the Notes to 15 U.S.C. 2056e.

definition of an in-scope product does not depend on the battery chemistry, but rather the shape of the battery (which contributes to the ingestion-related risk) and, as stated in part (B), whether the battery otherwise is associated with an ingestion hazard, which is consistent with the stated purpose in section 2(a)(1) of Reese's Law. 15 U.S.C. 2056e(a)(1).

This proposed rule focuses on addressing button cell and coin batteries under part (A) of the definition because other batteries where the diameter is less than the height, such as AAA cylindrical batteries, do not pose the same type or degree of ingestion hazard as button cell or coin batteries. Cylindrical batteries can pose a choking hazard, and CPSC is aware that consumers have ingested cylindrical batteries. However, the medical literature shows that injury or death due to ingestion of a cylindrical battery is rare. See Staff's NPR Briefing Package at Tab B, Section II.B. Consequently, the Commission is not including cylindrical batteries in the proposed rule at this time. If CPSC becomes aware of a serious ingestion hazard associated with another battery type, section 2(g) of Reese's Law allows the Commission to undertake additional rulemaking to address the hazard at any time. 15 U.S.C. 2056e(g).

Reese's Law defines a "consumer product containing button cell or coin batteries" as "a consumer product containing or designed to use one or more button cell or coin batteries, regardless of whether such batteries are intended to be replaced by the consumer or are included with the product or sold separately."<sup>4</sup> We preliminarily construe this definition to include products that are not sold with a battery, if they are designed to use a button cell or coin battery.

Section 2 of Reese's Law requires the Commission to issue a rule containing performance requirements for consumer products that contain button cell or coin batteries, and labeling requirements. Any rule issued under section 2(a) of Reese's Law will be considered a consumer product safety rule promulgated under section 9 of the Consumer Product Safety Act (CPSA). 15 U.S.C. 2056e(c); 15 U.S.C. 2058. CPSC's rule under section 2 of Reese's Law must be issued in accordance with the notice and comment provisions of the Administrative Procedure Act (APA). 5 U.S.C. 553; 15 U.S.C. 2056e(a).

Insofar as this proposed rule is based on section 2 of Reese's Law, it sets forth provisions implementing the statute's required performance and labeling requirements—and "only" those requirements, as specified in section 2(a). The standard promulgated under section 2(a) of Reese's Law shall apply to consumer products and battery packaging manufactured or imported after the effective date of the standard. See 15 U.S.C. 2056e Notes.

Section 2(a)(1) of Reese's Law mandates that the rule must include performance requirements for button cell or coin battery compartments on consumer products to secure them in a manner that eliminates or adequately reduces the risk of injury from the ingestion of button cell or coin batteries by children who are 6 years old or younger, during reasonably foreseeable use or misuse of the product. 15 U.S.C. 2056e(a)(1).

Section 2(a)(2) of Reese's Law mandates warning label requirements in a rule. Warnings are required:

- On the packaging of button cell or coin batteries (15 U.S.C. 2056e(a)(2)(A));
- On the packaging of consumer products containing button cell or coin batteries (15 U.S.C. 2056e(a)(2)(A));
- In any literature, such as a user manual, that accompanies a consumer product containing button cell or coin batteries (15 U.S.C. 2056e(a)(2)(B));
- As practicable, directly on a consumer product that contains button cell or coin batteries in a manner visible to the consumer upon installation or replacement of the button cell or coin battery (15 U.S.C. 2056e(a)(2)(C)(i));
- As practicable, in the case of a product for which the battery is not intended to be replaced or installed by the consumer, to be included directly on the consumer product in a manner that is visible to the consumer upon access to the battery compartment, except that if it is impracticable to label the product, this information shall be placed on the packaging or instructions (15 U.S.C. 2056e(a)(2)(C)(ii)).

Warning labels required by section 2(a) of Reese's Law must: (1) clearly identify the hazard of ingestion; and (2) instruct consumers, as practicable, to keep new and used batteries out of the reach of children, to seek immediate medical attention if a battery is ingested, and to follow any other consensus medical advice. 15 U.S.C. 2056e(b).

Section 4 of Reese's Law specifically exempts from the performance and labeling requirements in section 2 of the law, any toy product<sup>5</sup> that is in

compliance with the battery accessibility and labeling requirements in 16 CFR part 1250, Safety Standard Mandating ASTM F963 for Toys. 15 U.S.C. 2056e Notes. However, children's products that contain button cell or coin batteries and that are not a "toy product," would be required to meet the performance and labeling requirements in this proposed rule. An example of such products would be children's apparel, such as shoes, that light up and use a button cell or coin battery as a power source.

Section 2(d) of Reese's Law (15 U.S.C. 2056e(d)(1)) requires the Commission to rely on the provisions in a voluntary standard if, before promulgating a final rule, the Commission determines that: (A) a voluntary standard exists that meets the requirements for a standard promulgated under section 2(a) of Reese's Law with respect to any consumer product, and (B) the voluntary standard is in effect at the time of the determination by the Commission, or will be in effect not later than the date that is 180 days after the date of the enactment of Reese's Law (*i.e.*, February 12, 2023). The Commission must publish in the **Federal Register**, any determination regarding a voluntary standard under this provision. 15 U.S.C. 2056e(d)(2).

As set forth in section IV.A and V.A of this preamble, the Commission preliminarily determines that no existing voluntary standard fully meets the requirements in section 2(a) of Reese's Law. Accordingly, the Commission is proposing a rule that would meet the requirements of Reese's Law for all consumer products within the scope of the rule that is based on modifications to several existing voluntary standards. Because the Commission is proposing its own rule under Reese's Law, the procedural requirements in sections 2(e) and 2(f) of Reese's Law for relying upon a voluntary standard are not applicable. 15 U.S.C. 2056e(e) and (f).

Section 3 of Reese's Law requires special packaging for button cell or coin batteries. These requirements, codified in the Notes to 15 U.S.C. 2056e, are self-implementing, and do not require CPSC to issue a rule. Section 3(a) of Reese's Law states that not later than 180 days after the date of enactment of the Act, meaning February 12, 2023, button cell or coin batteries sold, offered for sale, manufactured for sale, distributed in commerce, or imported into the United States, or included separately with a

manufactured, or marketed as a plaything for children under 14 years of age." Notes to 15 U.S.C. 2056e.

<sup>4</sup> 15 U.S.C. 2056e Notes. The term "consumer product" has the same meaning as that in section 3(a) of the Consumer Product Safety Act (CPSA). 15 U.S.C. 2052(a).

<sup>5</sup> Consistent with 16 CFR part 1250, a "toy product" is defined as "any object designed,

consumer product sold, offered for sale, manufactured for sale, distributed in commerce, or imported into the United States, must be packaged in accordance with the standards provided in 16 CFR 1700.15, and tested in accordance with 16 CFR 1700.20 or another test method specified by rule by the Commission. 15 U.S.C. 2056e Notes. The requirements in section 3(a) shall be treated as a standard for special packaging of a household substance under section 3(a) of the Poison Prevention Packaging Act (PPPA). *Id.*; 15 U.S.C. 1472(a). At this time the Commission is not proposing a rule to implement section 3 of Reese's Law, which is effective by operation of the statute on February 12, 2023.<sup>6</sup>

#### *B. Explanation of Section 27(e) of the CPSA*

Finally, distinct from implementation of Reese's Law, and as described in section VI of this preamble, the Commission is also proposing to use its longstanding authority under section 27(e) of the CPSA (15 U.S.C. 2076(e)) to require notification of additional technical and performance data related to the safety of button cell or coin batteries that is to be provided to the original consumer at the time of sale, specifically on websites and in-store displays for the sale of button cell or coin batteries and consumer products that contain such batteries. Although these draft notification requirements are codified together with the safety

standard requirements proposed under Reese's Law, this is for the convenience of the public and the Commission, to ease compliance and enforcement. The two sets of requirements arise from different statutory authority and are legally distinct.

#### **II. Products Subject to the Proposed Rule**

As required by Reese's Law, the proposed rule establishes performance requirements for child-resistant button cell or coin battery compartments on consumer products that contain, or are designed to contain, such batteries. Reese's Law also requires warning labels for the: (1) packaging of button cell or coin batteries; (2) packaging of consumer products containing such button cell or coin batteries; (3) where practicable, battery compartments on consumer products that use button cell or coin batteries (regardless of whether they are replaceable); and (4) any literature, such as a user manual, that accompanies a consumer product containing button cell or coin batteries. 15 U.S.C. 2056e(a), (b).

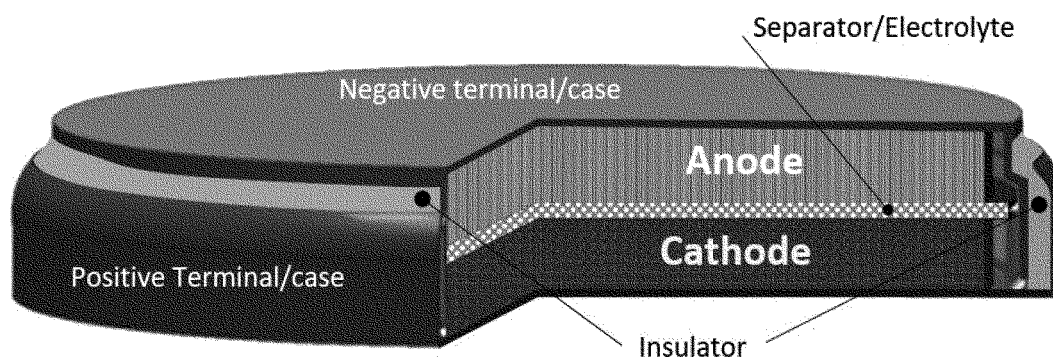
##### *A. Description of Button Cell or Coin Batteries Within the Scope of the NPR*

In general, button cell batteries are small, single-cell batteries that range from 5 mm to 32 mm (0.2 in. to 1.3 in.) in diameter and 1 mm to 6 mm (0.04 in. to 0.24 in.) in thickness. Reese's Law defines "button cell or coin battery" as: (A) a single cell battery with a diameter

greater than the height of the battery; or (B) any other battery, regardless of the technology used to produce an electrical charge, that is determined by the Commission to pose an ingestion hazard. 15 U.S.C. 2056e Notes. As explained above, this proposed rule focuses on addressing button cell and coin batteries under part (A), because other batteries where the diameter is less than the height, such as AAA cylindrical batteries, do not pose the same type or degree of ingestion hazard as button cell or coin batteries.

A button cell or coin battery (also referred to as a cell or disc/disk battery) stores chemical energy, which is converted to electrical energy when the battery is connected to a circuit. A button cell or coin battery consists of an anode (negative terminal), a cathode (positive terminal), and a separator and electrolyte between the anode and cathode, as shown in Figure 1. When the battery terminals are connected with a conductive material, such as when the battery is pressed into moist human tissue, an electric circuit is formed, and electric current flows through the conductive material and between the terminals. Button cell or coin batteries come in many shapes and sizes and are composed of different materials and chemicals. Power (voltage and capacity) and size requirements are the main driver of battery shape, chemical composition, and the number of required batteries.

**Figure 1. Battery Construction**



Button cell batteries, like those shown in Figure 2, are used to power small, portable electronic products, such as wrist watches and calculators. Button

cell batteries are usually disposable, single-cell batteries. Common anode materials are zinc or lithium. Common cathode materials are manganese

dioxide, silver oxide, carbon monofluoride, cupric oxide, or oxygen from the air. Button cell batteries tend

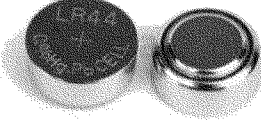

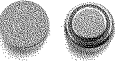
<sup>6</sup> Section 4 of Reese's Law exempts from the special packaging requirements in section 3(a) of Reese's Law, button cell or coin batteries that comply with the marking and packaging provisions in the ANSI Safety Standard for Portable Lithium

Primary Cells and Batteries (ANSI C18.3M). Packaged button cell or coin batteries that meet the ANSI standard are exempt from the special packaging requirements in section 3(a) of Reese's Law, but not from the labeling requirements in

section 2(a) of Reese's Law, as implemented in this proposed rule. Labeling on such battery packaging can meet both the ANSI standard and this proposed rule; CPSC's labeling requirements are additive to ANSI C18.3M labeling requirements.

to be manganese dioxide (alkaline) (1.5v) or silver oxide (1.55v).

**Figure 2. Example Button Cell Batteries**

		
LR44 button cell, 11.6mm (0.45 inch) diameter x 5.4mm (0.21 inch) thick	LR754 button cell, 7.9 mm (0.31 inch) diameter, 5.4mm (0.21 inch) thick	LR626 button cell, 6.8 mm (0.26 inch) diameter, 2.6mm (0.10 inch) thick

Lithium coin batteries, shown in Figure 3, were originally developed as a 3-volt power source for low-drain and battery-backup applications; because of

their high-energy density, correspondingly small size, and long shelf life, manufacturers have found lithium coin batteries useful for other

applications as well. Lithium coin batteries are commonly around 20 mm (0.787 inch) in diameter.

**Figure 3. Example Lithium Coin Batteries**

		
CR2032, 20mm (0.787 inch) diameter	CR2025, 20mm (0.787 inch) diameter	CR2450, 24mm (0.945 inch) diameter

#### *B. Description of Consumer Products Within the Scope of the NPR*

Consumer products containing, or designed to use, one or more button cell or coin batteries, whether they are replaceable or not, are subject to the rule. 15 U.S.C. 2056e Note. These products may be sold with batteries included, or batteries may be sold separately. The term “consumer product” has the same meaning as described in section 3(a)(5) of the CPSA, 15 U.S.C. 2052(a)(5): broadly, “any article, or component part thereof, produced or distributed (i) for sale to a consumer for use in or around a permanent or temporary household or residence, a school, in recreation, or otherwise, or (ii) for the personal use, consumption or enjoyment of a consumer in or around a permanent or temporary household or residence, a school, in recreation, or otherwise.”

Under the CPSA, a “consumer product” does not include any article that is not customarily produced or distributed for sale to, or use or consumption by, or enjoyment of, a consumer, which may include products used only in a professional capacity (*i.e.*, expensive heavy machinery used

only by professionally trained operators that is typically sold only to businesses and not to consumers). Moreover, a “consumer product” does not include products within the jurisdiction of some other Federal agencies, such as motor vehicles and motor vehicle equipment (*e.g.*, motor vehicle key fobs), or food, drugs, medical devices, or cosmetics (*e.g.*, thermometers, hearing aids). 15 U.S.C. 2052(a)(5).

“Toy products” are also exempt from this proposed rule, pursuant to section 4 of Reese’s Law, if they are in compliance with the battery accessibility and labeling requirements of 16 CFR part 1250 (the “toy standard”). A “toy product” is any object designed, manufactured, or marketed as a plaything for children under 14 years of age. Section 4 of Reese’s Law, 15 U.S.C. 2056e Notes. Not all children’s products are toys, however. A “children’s product” is a consumer product that is “designed or intended primarily for children 12 years of age or younger.” 15 U.S.C. 2052(a)(2). The Commission’s regulation at 16 CFR part 1200 further interprets the term. For example, children’s clothing containing button cell or coin batteries, or child-themed non-toy products that

use button cell or coin batteries, are children’s products subject to the requirements of this proposed rule.

Consumer products within the scope of the proposed rule include common household portable devices, wearable accessories, and decorative electronic devices. Some examples of household objects that may use button cell or coin batteries are remote controls, games and toys, calculators, keychain flashlights, watches, flashing shoes and clothing, musical greeting cards, cameras, flameless candles, and holiday ornaments.

#### *C. Description of Packaging Subject to the NPR*

Reese’s Law requires warnings on the packaging of button cell and coin batteries, and on consumer products that contain button cell or coin batteries. 15 U.S.C. 2056e(a), (b). Accordingly, CPSC staff reviewed consumer product and button cell and coin battery packaging to determine what, if any, warnings were already present. Staff found that some manufacturers of button cell or coin batteries include on the packaging of those batteries a safety statement, such as: “Keep away from small children. If swallowed promptly

see a doctor,” or “CAUTION: Keep batteries away from children. If swallowed, consult a physician at once.” See Staff’s NPR Briefing Package, p 7, Figures 5 and 6.

As reflected in ANSI Z535.4 American National Standard Product Safety Signs and Labels (ANSI Z535.4), use of the word “CAUTION” on a warning label signals less severe injuries than using “WARNING.” For example, the word “WARNING” should be used for hazards where serious injury or death will occur. Staff found that packaging for the more hazardous lithium coin batteries often includes the icon: “Keep out of Reach” on the front and the signal word “WARNING,” followed by a statement that “Death or serious injury can occur in as little as 2 hours if swallowed” on the back side of the packaging, along with additional safety information related to the ingestion hazard and other hazards. See, e.g., Staff’s NPR Briefing Package, p. 8, Figure 7.

Unlike the packaging for button cell and coin batteries, CPSC staff’s review of packaging for consumer products that contain a button cell or coin battery found that such packaging does not consistently warn that the product uses a button cell or coin battery; nor does the packaging consistently include warnings that button cell or coin batteries pose an ingestion hazard (see, e.g., Staff’s NPR Briefing Package, p. 8–9, Figures 8 and 9). However, accompanying literature, when provided with a consumer product, sometimes contains warning information pertaining to the ingestion hazard, even when the product packaging does not include such warnings.

As explained in sections V and VI of this preamble, the proposed rule would require standardized warning statements across packaging for button cell and coin batteries, and the packaging for consumer products that contain such batteries.

### III. Incident Data and Hazard Patterns

Medical literature, CPSC data, and data from the National Capital Poison Center (NCPC) describe the deaths and serious injuries associated with the ingestion or insertion of button cell or coin batteries, including choking, internal chemical burns, chemical leakage, pressure necrosis (tissue damage), and the creation of hazardous chemicals (such as sodium hydroxide and hydrochloric acid) and related

hazards. Tab A of Staff’s NPR Briefing Package describes in more detail the incident data from the National Electronic Injury Surveillance System (NEISS) and from the Consumer Product Safety Risk Management System (CPSRMS). Staff also reviewed reports of deaths and injuries from NCPC data, as described in Tab B of Staff’s NPR Briefing Package.

#### A. Fatalities

The NCPC, or Poison.org, has tracked button cell or coin battery ingestions occurring from 1977 to the present. See Tab B of Staff’s NPR Briefing Package. From 1977 to June 2022, the NCPC reported 69 deaths due to ingestion of button cell or coin batteries.<sup>7</sup> In the 47 cases where battery chemistry was known, 44 involved lithium batteries, two involved manganese dioxide chemistry, and one involved an alkaline button battery. The sources of these batteries, where known, were a remote control (8), toy (4), watch (2), camera (2), movie camera, camera flash, garage door opener, electric candle, remote car alarm, torch, tea light (spare battery), 3D TV glasses, key fob, and loose (battery fed to child by older brother). The button cell or coin battery size, where known, ranged from 10 mm to 25 mm (0.4 in. to 1 in.). The symptoms presented resembled those of a cold or upper respiratory infection and were often misdiagnosed as an infection or croup, or missed all together. In some cases, the first symptom was vomiting blood or blood coming from the nose, followed by death. Two deaths were caused by sepsis<sup>8</sup> after removal of the battery. Fifty of the 69 deaths in the NCPC data set were due to the battery burning through the esophagus and creating a hole to adjoining tissues, such as the trachea or arteries.

The Commission is also aware of 25 fatalities from button cell or coin battery ingestions reported nationally in the CPSRMS data from January 1, 2011 to December 31, 2021.<sup>9</sup> See Tab A of Staff’s NPR Briefing Package. CPSC staff determined the source of the button cell or coin battery in seven of these fatalities: two from remote controls, two

from a tracking device, one from a toy, one from the battery packaging, and one loose battery. The mechanisms of death represented in these fatalities are consistent with those seen in the medical literature and from the NCPC data.

#### B. Nonfatal Incidents

From 1982 to June 2022, NCPC reported 267 cases of severe injury from button cell or coin battery ingestion.<sup>10</sup> Nine injuries were from manganese dioxide batteries, two were from mercuric oxide, two were from alkaline, one was from silver oxide, and 182 were from lithium batteries. Sources of the batteries, where known, were remote controls (26), toys (13), cameras (7), watches (7), scales (7), key fobs (7), calculators (5), battery packages (3), digital ear thermometers (2), flashlights (2), handheld computer games (2), soles of shoes (2), portable CD player, hair dryer, ab belt (exerciser), personal digital organizer, talking book, bicycle computer, computer, singing card, loose, guitar tuner, night light, baby monitor, lighted tweezers, book light, video camera, keychain, 3D TV glasses, portable speaker, lighted ring, and glucometer. Where battery size was known, most of the batteries were 20 mm in diameter, and the battery size range was from 11.6 mm to 24.6 mm (0.46 in. to 0.97 in.). In many cases, impaction of the button battery in the esophagus led to damage due to burning of the esophagus.

Based on incident information in NEISS, CPSC staff estimates that from January 1, 2011, through December 31, 2021, 54,300 emergency department-treated incidents involved button cell or coin battery ingestion or insertion into the mouth, nose, or ear. This excludes cases establishing ingestion of a battery in which the type of battery is not indicated. Staff’s estimate generally relied upon the final diagnosis conclusion as recorded in short summaries from medical professionals. The lack of detection of a battery as a foreign body does not necessarily contraindicate battery presence (which may sometimes be missed by x-ray scans). Consequently, these estimates likely underestimate the actual number of button cell or coin battery ingestions or insertions. Table 1 summarizes the number of cases estimated per year.

<sup>7</sup> Fatal Cases (*poison.org*) Fatal Button Battery Ingestions: 69 Reported Cases (accessed June 2022).

<sup>8</sup> An infection of the blood stream resulting in a cluster of symptoms, such as drop in blood pressure, increase in heart rate, and fever.

<sup>9</sup> Incidents reported via CPSRMS as of May 2022. CPSC expects additional reporting of CPSRMS incidents for the most recent years 2020–2021, due to a time lag in reporting to CPSC. The reported incidents may be included in the NCPC data.

<sup>10</sup> Severe Cases (*poison.org*) Nonfatal Button Battery Ingestions with Severe Esophageal or Airway Injury: 267 Cases. (Accessed June 2022).

TABLE 1—ESTIMATED NUMBER OF BUTTON CELL OR COIN BATTERY INGESTIONS, INSERTIONS, OR IMPACTIONS TREATED IN HOSPITAL EMERGENCY DEPARTMENTS, 2011–2021

Year	Estimate	N	CV
2011 .....	4,600	170	0.20
2012 .....	4,500	179	0.18
2013 .....	5,000	178	0.21
2014 .....	5,500	177	0.19
2015 .....	3,500	163	0.15
2016 .....	6,500	237	0.15
2017 .....	5,400	196	0.20
2018 .....	4,500	200	0.17
2019 .....	4,200	178	0.26
2020 .....	5,500	270	0.14
2021 .....	5,200	235	0.18
Total .....	54,300	2,183	0.15

Source: NEISS, CPSC.

Summations of estimates may not add to the total estimates provided in the tables, due to rounding. Staff derived estimates from data in the NEISS sample, with number of observations (N) and coefficient of variation (CV) provided. Estimates spanning periods of multiple years (such as the 11 years from 2011 to 2021) are total estimates, not annual averages.

Staff estimates that of the 54,300 cases that were indicated to involve a button cell or coin battery, approximately 88 percent involved ingestion through the mouth, while the remainder arose from insertion into the ear or nose. An estimated 8,800 (16% of 54,300) people were hospitalized as a result of these incidents, while an estimated 44,500

(82% of 54,300) people were treated and released.

Table 2 provides estimates of victim age at the time of initial treatment associated with button cell or coin battery incidents. Staff estimates that 16,100 (30%) of the 54,300 incidents involved young children under the age of 2 years, and an estimated 26,900 (50%) involved children between the

ages of 2 and 6. In total, an estimated 43,000 (79%) of the incidents were associated with children 6 years of age or younger—the age group that is the focus of Reese’s Law. *See* 15 U.S.C. 2056e(a)(1). Ingestions by adults and elders can be related to confusing loose button cell or coin batteries with medication and ingesting batteries, believing mistakenly that they are pills.

TABLE 2—ESTIMATED NUMBER OF BUTTON CELL OR COIN BATTERY INGESTION OR INSERTION INCIDENTS BY VICTIM AGE (OR AGE RANGE), 2011–2021

Victim age (or age range)	Estimate	Estimated percent	N	CV
0–11 months .....	2,900	5	129	0.27
12–23 months .....	13,200	24	513	0.21
2 years .....	8,700	16	378	0.19
3 years .....	7,100	13	315	0.19
4 years .....	5,500	10	220	0.12
5 years .....	3,200	6	146	0.17
6 years .....	2,400	4	84	0.18
7 years .....	1,900	4	71	0.20
8 years .....	1,500	3	59	0.24
9 to 14 years .....	2,900	5	141	0.16
15–24 years .....	(*)	2	33	(*)
25–34 years .....	(*)	1	8	(*)
35–44 years .....	(*)	<1	5	(*)
45–54 years .....	(*)	<1	1	(*)
55–64 years .....	(*)	<1	6	(*)
65–74 years .....	(*)	1	17	(*)
75–84 years .....	(*)	2	21	(*)
85+ years .....	1,500	3	36	0.22
Total .....	54,300	100	2,183	0.15

Source: NEISS, CPSC.

\*This estimate does not meet NEISS reporting criteria. For a NEISS estimate to satisfy all reporting criteria, the coefficient of variation (CV) cannot exceed 0.33, there must be at least 20 sample cases (N), and there must be at least 1,200 estimated injuries.

Table 3 shows 11,900 (22% of 54,300) incidents where the button cell or coin battery was known to have come from a product. Staff estimates that at least 5,300 batteries (45% of 11,900) were obtained from a “Non-Toy Consumer

Product” (*i.e.*, in scope of Reese’s Law). Such products included lights (*i.e.*, flashlights, pen lights), remote controls, watches, calculators, decorations and ornaments, electronic candles and tea lights, clocks and timers, electronic

sound making books, pens, guitar tuners, and other consumer products. Staff estimates that 4,400 incidents (37%) classified as “toys/games” include children’s toys and games that fall within the toy standard and are

outside the scope of this proposed rule. An estimated 18 percent of the 11,900 product-related incidents are associated

with medical devices, which are outside the scope of the rulemaking for child-resistant battery compartments,

including hearing aids (13%) and other medical devices (5%).

TABLE 3—ESTIMATED NUMBER OF BUTTON CELL OR COIN BATTERY INCIDENTS WHERE OBTAINED FROM A PRODUCT BY BATTERY SOURCE AND PRODUCT TYPE, 2011–2021

Battery source product type	Estimate	Estimated percent	N	CV
Consumer Product (excluding Toys/Games and Key Fobs) .....	5,300	42	237	0.17
Toys/games .....	4,400	37	176	0.17
Car remotes and key fobs .....	(*)	2	11	(*)
Hearing aid .....	1,600	13	52	0.21
Other Medical Device .....				
(excluding hearing aids) .....	(*)	5	16	(*)
Unknown Product Type ** .....	(*)	<1	4	(*)
Total .....	11,900	100	496	0.14

Source: NEISS, CPSC.

\* This estimate does not meet NEISS reporting criteria.

\*\* For a small proportion of cases, although it could be determined that the batteries were neither loose nor from packaging and came from some product or device, it could not be determined which *type* of product or device.

In the CPSRMS data, staff identified 87 nonfatal incidents involving button cell or coin battery ingestion (*i.e.*, “Ingestion” incidents) or unintended access to the button cell or coin battery

with no ingestion (*i.e.*, “Battery Access” incidents) from January 1, 2016, through December 31, 2021. *See* Staff’s NPR Briefing Package, p. 13. Table 4 provides a summary of the 74 nonfatal incidents

that involved a product, rather than battery packaging, as the source of access to the battery.

TABLE 4—REPORTED NUMBER OF PRODUCT CLASSIFIED NONFATAL INCIDENTS BY INCIDENT CLASSIFICATION AND BATTERY SOURCE PRODUCT TYPE, 2016–2021

Battery source product type	Incident classification		Combined nonfatal	
	Ingestion	Battery access	Total	Total percent
Non-toy Consumer Product .....	13	16	29	42
Toys/games .....	20	23	43	56
Medical Device .....	1	1	2	3
Total .....	34	40	74	100

Source: CPSRMS, CPSC.

A high proportion of button cell and coin battery incidents reportedly involved toys and games. Based on products in the CPSRMS database where the exact product is known, many of the toys are subject to the requirements of the mandatory toy standard, codified in 16 CFR part 1250, which requires toy products to meet the battery accessibility requirements in the voluntary standard for toys, ASTM F963–17.<sup>11</sup> CPSC staff has raised a concern with ASTM that ASTM F963–17’s requirements for battery compartments do not adequately protect against the liberation of button cell or coin batteries from toys and becoming an ingestion hazard.<sup>12</sup>

<sup>11</sup> Products referred to as “toys” in the incident data, that do not fall within the scope of part 1250, would be subject to this rule; thus, the rule will address some unknown portion of products indicated in the incident data as toys or games.

<sup>12</sup> <https://www.cpsc.gov/s3fs-public/8-19-2022-Letter-to-ASTM-Battery-Operated-Toys.pdf?VersionId=PgFoeCeb0BYz0kyg6z87tbwHKv>

### C. Hazard/Injuries Associated With Button Cell or Coin Batteries

As set forth in detail in Tab B of Staff’s NPR Briefing Package, CPSC staff reviewed medical literature related to battery-ingestion injuries, CPSC data, and data from Poison.org, and found that ingested batteries, particularly button cell or coin batteries, can lodge in the esophagus and cause severe tissue damage after only a few hours. The conductive soft tissue in the digestive tract can form a circuit between the battery terminals, creating an electric current. When lodged in the esophagus, button cell or coin batteries can lead to a burn in the esophagus, perforations, and burning of nearby tissue. Generation of hydroxide by the current created as a result of the battery contacting tissue in the digestive tract is

3x9W0y. Staff Correspondence Relating to Voluntary Standards—Letter to ASTM re: Battery Operated Toys, August 19, 2022.

the primary pathway to the chemical burn hazard associated with ingestion of lithium coin batteries, particularly, because of their higher voltage and capacity. Other mechanisms of injury associated with button cell or coin batteries include leakage of alkaline electrolyte from alkaline button cell batteries or pressure necrosis from extended contact of the foreign object with the soft tissue.

In addition to ingestion from swallowing, a proportion of nose insertions ultimately results in ingestion or aspiration, with batteries getting into the digestive tract or airways. Button cell or coin batteries impacted in the nose can lead to severe damage to the endonasal mucous membranes, necrosis (tissue damage) of the nasal septum cartilage, and nasal septum perforation. Tab B, Appendix G of Staff’s NPR Briefing Package, provides examples of ear and nose insertion incidents.

CPSC staff specifically considered the ingestion hazard presented by zinc-air button cell and coin batteries in consumer products, and found that the risk is low. Staff estimates that at least 9 percent of button cell or coin battery ingestion or insertion incidents involve zinc-air batteries. But zinc-air batteries are primarily used in hearing aids, which are medical devices under the jurisdiction of the FDA. Staff did not identify zinc-air batteries being used in any consumer products. Furthermore, zinc-air batteries are typically much smaller than other button cell or coin batteries, and therefore, they do not present the same risk of choking. Staff did not identify any choking incidents in which zinc-air batteries were the source battery. Moreover, zinc-air batteries use a technology that needs air for the current to flow or voltage to be present on the terminals. Accordingly, if a zinc-air battery is swallowed or inserted into the nose, wet mucosa stops this flow of air and also the voltage, so there are no associated chemical or hydroxide burns. Zinc-air batteries are sealed with a hydrophobic material, so there is also little chance for electrolyte leakage. See Tab B of Staff's NPR Briefing Package.

Although hearing aids with zinc-air batteries would not be subject to performance requirements for consumer products (because hearing aids are medical devices), zinc-air batteries can be consumer products. Based on staff's assessment of the characteristics of zinc-air batteries and the lack of ingestion

injury associated with these batteries, however, the Commission proposes that the labeling requirements of Reese's Law not apply to the packaging for zinc-air button cell or coin batteries. The Commission seeks comment on whether any consumer products contain, or are designed to contain, zinc-air button cell or coin batteries, if so, whether performance standards for battery compartments should apply to these consumer products, and whether the Commission should require ingestion warnings on zinc-air button cell or coin battery packaging.

#### D. Hazard Patterns

CPSC staff identified the primary ways that children gain access to button cell or coin batteries before ingesting them:

1. *Access to the battery from a product's intact battery compartment.* Seventy-nine out of 112 fatal and nonfatal CPSRMS incident narratives staff identified in Tab A of Staff's NPR Briefing Package refer to products with button cell or coin battery compartments that are potentially easily accessed by children.<sup>13</sup> Ten of the 79 incident narratives refer to batteries in compartments that appeared easy to open or defeat. These batteries did not accidentally come out of a battery compartment, but appeared easily accessible to children while in a compartment.

2. *Obtaining the battery from a battery compartment that broke or failed to contain the battery as intended.* Sixty-nine of the 79 fatal and nonfatal

CPSRMS incidents involving products describe the batteries unintentionally coming out of the battery compartment or the product, or the battery compartment opening or breaking, often while a child was interacting with the product. In some cases, the battery was found to have come from a product only after a child was diagnosed with having ingested the battery. Eighteen of these incidents specifically describe products with ineffective screws, including comments about stripped threads, continuous spinning, screws that were "too short," and compartments that popped open, even though there was a screw.

3. *Removing the battery from its packaging, or obtaining a loose battery that was not contained within packaging or a product.* Six out of 112 fatal and nonfatal CPSRMS incident narratives refer to loose batteries or battery-packaging hazards, and staff estimates that at least 7 percent of NEISS incidents involve loose batteries or batteries removed from their packaging.

#### E. Recalls

Table 5 describes the six CPSC-conducted recalls that occurred between January 1, 2011, and July 31, 2022, involving consumer products containing button cell or coin batteries associated with a battery ingestion hazard. The recalled products were responsible for four reported battery-ingestion incidents and affected approximately 823,900 products (including toys).

TABLE 5—SUMMARY OF RECALLS INVOLVING PRODUCTS WITH BUTTON CELL AND COIN BATTERIES

Recall date	Firm	Hazard	Number of recalled units	Number of incidents & injuries reported	Press release No.
10/10/2016 .....	Target .....	The gel clings can separate and expose the inner decal and LED/button battery compartment, posing choking and button battery ingestion hazards to children.	About 172,000 units Halloween LED Gel Clings.	No Injuries Reported .....	17–020
12/16/2016 .....	Figi's Companies Inc ..	The tin's music sound chip mechanism can separate and expose button batteries, posing choking and button battery ingestion hazards to children.	About 5,000 units "Christmas Wishes" Tins.	No Injuries Reported .....	17–120
5/23/2017 .....	Hobby Lobby .....	The battery cover can detach and expose the small coin cell batteries, posing choking and ingestion hazards to young children.	About 43,400 units Easter and July 4th-themed Light-Up Spinner Toys.	Received one report of a 14-month-old child who ingested the battery.	17–166
12/19/2019 .....	Toysmith .....	The battery cover can detach and expose the button-cell batteries, posing choking and ingestion hazards to young children.	About 58,000 units Light-Up Magic Wands.	One report of a child swallowing one of the batteries removed from the toy. Medical attention was required to remove the battery.	20–045
5/12/2021 .....	K & M International ....	The coin cell battery inside the slap watches can fall out, posing battery ingestion and choking hazards to young children.	About 463,000 units Wild Republic Slap Watches.	No incidents or injuries have been reported.	21–134

<sup>13</sup> Out of the 79 products included in this hazard pattern analysis, 77 are consumer products, and two

are household medical devices (body temperature thermometer and toothbrush).



TABLE 5—SUMMARY OF RECALLS INVOLVING PRODUCTS WITH BUTTON CELL AND COIN BATTERIES—Continued

Recall date	Firm	Hazard	Number of recalled units	Number of incidents & injuries reported	Press release No.
12/1/2021 .....	Halo Brand Solutions	A child can disassemble the projector flashlight and access the button cell batteries, posing ingestion and choking hazards.	About 82,500 units Projector Flashlights..	Received two reports of children accessing the button cell batteries from the flashlight, and in one case, a child required surgery to remove a swallowed battery.	22-024

#### IV. Assessment of Performance Requirements for Battery Compartments in Relevant Voluntary Standards, and Description of the Proposed Rule's Battery Compartment Requirements

In this section, the Commission describes staff's assessment of existing voluntary standards that establish performance requirements for button cell or coin battery compartments in consumer products, and the elements of those standards that the Commission proposes to adopt as the basis for its proposed rule implementing Reese's Law.

##### A. Preliminary Determination Regarding Performance Requirements in Existing Voluntary Standards

Section 2(d) of Reese's Law states that the Commission shall not promulgate a final rule for consumer products that contain button cell or coin batteries if the Commission determines, with respect to any consumer product, that a

voluntary standard that meets the requirements of section 2(a) of Reese's Law is either in effect at the time of the Commission's determination, or will be in effect not later than 180 days after the enactment of Reese's Law (meaning by February 12, 2023). Accordingly, CPSC staff assessed voluntary standards to determine whether any existing standards meet the requirements of section 2(a)(1) of Reese's Law, which mandates that the rule must include performance requirements for button cell or coin battery compartments on consumer products to secure them in a manner that eliminates or adequately reduces the risk of injury from the ingestion of button cell or coin batteries by children who are 6 years old or younger during reasonably foreseeable use or misuse of the product. 15 U.S.C. 2056e(a)(1).

Tab D of Staff's NPR Briefing Package contains a detailed review of six voluntary standards that relate to the accessibility of button cell or coin

batteries. Four of these six standards most directly address the hazards associated with button cell and coin battery accessibility in consumer products, as required by Reese's Law. These four voluntary standards are:

- UL 4200A, *Standard for Safety for Products Incorporating Button or Coin Cell Batteries of Lithium Technologies* (UL 4200A);
- ASTM F963, *Standard Consumer Safety Specification for Toy Safety*;
- IEC 62368-1, *Audio/video, information and communication technology equipment-Part 1: Safety requirements*; and
- IEC 62115, *International Standard for Electric Toys—Safety*.

Table 6 provides CPSC staff's summary of how each of these standards addresses the battery-ingestion hazard, with requirements that are intended to minimize the risk of children removing button cell or coin batteries from a consumer product.

TABLE 6—SUMMARY OF VOLUNTARY STANDARDS REQUIREMENTS FOR BUTTON CELL OR COIN BATTERY ACCESS IN A CONSUMER PRODUCT

Standard	Scope	Required action(s) to open battery compartment	Abuse testing
UL 4200A .....	Household-type products that incorporate or may use button cell or coin batteries of lithium technologies.	(1) A tool, such as a screwdriver or coin, is required to open the battery compartment; screw fasteners must be captive; OR (2) The battery compartment door or cover requires the application of a minimum of two independent and simultaneous movements to open by hand.	<i>Preconditioning:</i> (1) 7 hours of pre-conditioning in oven at 70 °C (158 °F); (2) Open/close and remove/install battery 10 times. <i>Abuse Tests:</i> (1) <i>Drop test</i> —maximum 10 times at 3.3 ft in positions likely to produce the maximum force on the battery compartment or enclosure; (2) <i>Impact test</i> —3 impacts by steel sphere imparting 2-J of energy; and (3) <i>Crush test</i> —74 lbf. over 38 square inches for 10s in positions likely to produce the most adverse results.
ASTM F963 .....	Toys intended for use by children under 14 years of age.	Coin, screwdriver, or other common household tool required to open battery compartment.	(1) <i>Drop test</i> —maximum 10 times at 4.5 ft in random orientation; minimum of 4 times at 3 ft in random orientation; (2) <i>Torque test</i> —2–4 in-lbs. of torque over 10 seconds; (3) <i>Tension test</i> —10–15 lbs. of tension over 10 seconds; (4) <i>Tension test for pliable materials</i> —10–15 lbs. of tension over 10 seconds; and (5) <i>Compression test</i> —20–30 lbf over 1 square inch for 10 seconds.
IEC 62368-1 .....	Electrical and electronic equipment within the field of audio, video, information and communication technology, and business and office machines with a rated voltage not exceeding 600 V.	(1) A tool, such as a screwdriver or coin, is required to open the battery compartment; screw fasteners must be captive; OR (2) The battery compartment door or cover requires the application of a minimum of two independent and simultaneous movements to open by hand.	<i>Preconditioning:</i> (1) 7 hours of pre-conditioning in oven at 70 °C (158 °F); and (2) Open/close and remove/install battery 10 times. <i>Abuse Tests:</i> (1) <i>Drop test</i> —maximum 10 times at 3.3 ft in positions likely to produce the maximum force on the battery compartment or enclosure; (2) <i>Impact test</i> —3 impacts by steel sphere imparting 2-J of energy; and (3) <i>Crush test</i> —apply 74 lbf. for 10s in positions likely to produce the most adverse results.

TABLE 6—SUMMARY OF VOLUNTARY STANDARDS REQUIREMENTS FOR BUTTON CELL OR COIN BATTERY ACCESS IN A CONSUMER PRODUCT—Continued

Standard	Scope	Required action(s) to open battery compartment	Abuse testing
IEC 62115 .....	Electric toys being any product designed or intended for use in play by children under 14 years of age.	Batteries that fit wholly within the small parts cylinder shall not be removable without the aid of a tool, screw fastener must be captive.	(1) <i>Screw test</i> —Remove/replace screws 10 times with torque applied; (2) <i>Drop test</i> —maximum 10 times at 93 cm $\pm$ 5 cm (36.6 in.) in random orientation; minimum 4 times at 93 cm $\pm$ 5 cm (36.6 in.) in random orientation; (3) <i>Impact test</i> —3 impacts by hammer imparting 0.5-J of energy; (4) <i>Tension test</i> —70 N $\pm$ 2 N (15.7 lbs.) of tension over 10 seconds; and (5) <i>Tension test</i> —70 N $\pm$ 2 N (15.7 lbs.) tension force on a textile seam over 10 seconds.

The left-hand column in Table 7 displays the categories staff evaluated to assess satisfaction of Reese's Law, and staff's evaluation of whether the standard eliminates or adequately reduces the risk of injury from button cell or coin battery ingestion by children age 6 or under. Specifically, Table 7 includes the scope of the voluntary standard, and whether the scope

includes all or only some relevant battery chemistry types that create an ingestion hazard and associated consumer products as seen in the incident data; whether the standard's performance requirements for constructing and securing the battery compartment would eliminate or adequately reduce the risk of injury from access to batteries from consumer

products and their ingestion, as seen in the incident data, or inadequately address the risk; and whether the standard addresses use-and-abuse testing at all, and if so, the adequacy of the use-and-abuse testing to eliminate or adequately reduce ingestion incidents as seen in the data.

TABLE 7—ASSESSMENT OF EXISTING VOLUNTARY STANDARDS FOR BUTTON CELL OR COIN BATTERIES

	UL 4200A	ASTM F963	IEC 62368-1	IEC 62115
<i>Scope:</i>				
Battery Chemistry Type .....	Lithium .....	Any .....	Any .....	Any.
Product Type .....	Any .....	Toys .....	Audio/Visual Equipment.	Electronic Toys.
<i>Construction:</i>				
Opens with Tool .....	A .....	A .....	A .....	A
Captive screws .....	I .....	.....	I .....	A
Threaded attachment requirements .....	A .....	.....	I .....	
Opens with two independent and simultaneous movements.	I .....	.....	I .....	
Accessibility .....	A .....	A .....	A .....	A
<i>Use and Abuse:</i>				
Pre-conditioning in oven .....	A .....	.....	A .....	
Open/close and remove/install battery/screw(s) 10 times	A .....	.....	A .....	
Drop test—based on product weight/type .....	I .....	I .....	I .....	I
Drop test—based on age grading .....	.....	I .....	.....	
Impact Test .....	A .....	.....	I .....	I
Crush Test (big surface area) .....	A .....	.....	I .....	
Torque Test .....	.....	A .....	.....	
Tension Test .....	.....	A .....	.....	A
Tension Test—Seams .....	.....	A .....	.....	A
Compression Test (little surface area) .....	.....	A .....	.....	
Accessibility Probe Compliance Test .....	I .....	I .....	I .....	A
Securement (non-removable batteries) .....	A .....	.....	.....	

Blank—Does not address requirements, I—Inadequately addresses requirements, A—Adequately addresses requirements.

Table 7 summarizes staff's assessment in Tab D of Staff's NPR Briefing Package, displaying an "I" where a standard contains a performance requirement that inadequately addresses the risk of ingestion, and an "A" if CPSC staff assessed the requirement as adequate to address the risk of ingestion. Table 7 shows that no existing voluntary standard includes within its scope all battery types and all consumer products that contain button cell or coin batteries, as reflected in the

incident data. The scope of each voluntary standard staff reviewed is narrower than the scope of the proposed rule, which applies to all non-toy consumer products within the Commission's jurisdiction that contain button cell or coin batteries. For example, UL 4200A only applies to lithium batteries.

Regarding construction of the battery compartments, UL 4200A is the only voluntary standard that contains requirements that would address

relevant incidents seen in the data, but in staff's view, not all the requirements are adequate to address the risk of injury. For example, although UL 4200A contains a requirement for a double-action locking mechanism, staff found that the language in UL 4200A could lead to defective double-action locks, which could allow a child to gain access to the battery compartment. Staff also found that requirements in UL 4200A are not always clear and could result in different interpretations by testers,

leading to inconsistent and unreliable testing and, ultimately, risk to children.

Regarding ASTM F963, Table 6 reflects that it requires a tool to open a battery compartment, but does not require captive screws. This means that consumers could undermine the screw requirement by not using them, discarding them, or losing the screws. ASTM F963 also does not have torque requirements for fasteners, nor does it provide requirements for fastener threading or retention. These omissions are a deficiency, given the incident data involving lost screws and stripped screw holes. Staff concluded that the IEC standards contain similar deficiencies related to battery compartment fasteners, as summarized in Tables 6 and 7.

As part of its requirements for secure battery compartments, Reese's Law requires a performance standard for consumer products addressing reasonably foreseeable use-and-misuse conditions. Accordingly, staff

considered the adequacy of use-and-abuse testing of consumer products for each voluntary standard, and staff assessed whether the use-and-abuse testing would eliminate or adequately address deaths and injuries in the incident data. As shown in Table 7, and as described in more detail in Tab D of Staff's NPR Briefing Package, staff advises that none of the voluntary standards, alone, provides for all the use-and-abuse testing needed to eliminate or adequately reduce incidents seen in the data.

Based on CPSC staff's review and analysis of voluntary standards related to child-resistant battery compartments for consumer products that contain button cell or coin batteries, as set forth in Tables 6 and 7 above, and Tab D of Staff's NPR Briefing Package, the Commission preliminarily determines that no existing voluntary standard contains performance requirements that would eliminate or adequately reduce the risk of button cell or coin battery

ingestion associated with consumer products that contain button cell or coin batteries within the scope of the proposed rule. However, as set forth below, the Commission draws on elements of these four voluntary standards to propose a rule that meets the requirements of Reese's Law. We seek comment from the public regarding staff's assessment of the relevant voluntary standards, and on our preliminary conclusion that, for the reasons given by staff, none of the standards, alone, satisfy the requirements for adoption as a consumer product safety rule under section 2(d) of Reese's Law, 15 U.S.C. 2056e(d).

*B. Elements of the Proposed Standards for Battery Compartment Accessibility in Products Incorporating Button Cell or Coin Batteries*

Tables 8 and 9 summarize the performance requirements in the proposed rule.

TABLE 8—REQUIREMENTS FOR CONSUMER PRODUCTS WITH COMPARTMENTS FOR REPLACEABLE BATTERIES

**Button cell or coin batteries must not become accessible or liberated when tested to these requirements:**

Construction Requirements	
Battery Compartment Construction Options.	<p><i>Option 1:</i> Coin, screwdriver, or other household tool.</p> <ul style="list-style-type: none"> <li>• Captive screws</li> <li>• Two threads engaged or minimum torque + spin angle.</li> </ul> <p><i>Option 2:</i> Two independent &amp; simultaneous hand movements.</p> <ul style="list-style-type: none"> <li>• Cannot be combinable to a single movement with a finger or digit.</li> </ul>
Accessibility Test .....	Open or remove any part of the compartment not meeting Option 1 or Option 2 Apply Tension Test for Seams from 16 CFR part 1250 on pliable materials, using a force of 70.0 N (15.7 lbf). Determine whether Test Probe 11 from IEC 61032 can touch the battery.
Preconditioning Requirements	
Preconditioning in Oven .....	Thermoplastics—7 hours at 158 °F or greater, based on operational temperature.
Simulated Battery Replacement.	Open/Close and remove/install battery 10 times.
Use and Abuse Tests	
Drop Test .....	10 drops from 1 m (39.4 in) on hardwood, in positions likely to produce maximum force.
Impact Test .....	3 impacts on battery compartment with steel sphere, 2 J (1.5 ft-lbf) of energy.
Crush Test .....	335 N (75.3 lbf) for 10 s, using 100 by 250 mm (3.9 by 9.8 in) flat surface.
Compression Test .....	Test from 16 CFR Part 1250, using a force of 136 N (30.6 lbf).
Torque Test .....	Test from 16 CFR part 1250, using a torque of 0.50 Nm (4.4 in.-lbf).
Tension Test .....	Test from 16 CFR part 1250, using a force of 72.0 N (16.2 lbf).
Probe for Accessibility .....	Apply 50 N (11.2 lbf) with Test Probe 11 from IEC 61032 to confirm compliance.

TABLE 9—REQUIREMENTS FOR CONSUMER PRODUCTS WITH COMPARTMENTS FOR NON-REPLACEABLE BATTERIES

Option 1—Not Accessible .....	Meets the same requirements as battery compartment for replaceable batteries.
Option 2—Accessible .....	<ul style="list-style-type: none"> <li>• Secured with soldering, fasteners such as rivets, or equivalent means.</li> <li>• Applicable preconditioning requirements apply.</li> <li>• Confirmed with secureness test: test hook applies a force of 22 N (4.9 lbf) directed outwards for 10 s, at all possible points. Battery cannot liberate from the product.</li> </ul>

Below we describe the rationale for the proposed requirements.

#### 1. Construction: Actions to Open the Battery Compartment

Each of the four voluntary standards specifies similar requirements for a locking mechanism to secure the battery compartment that requires a tool (or coin) to open, to reduce the possibility of children removing the battery. Generally, requiring a coin or tool to open a battery compartment addresses child access to the battery compartment, because younger children may lack the required cognitive ability and fine motor coordination to perform the necessary actions to access the battery compartment, as discussed in Tab C of Staff's NPR Briefing Package. UL 4200A, however, is the only voluntary standard that includes requirements for this locking mechanism, specifying either a minimum torque of 0.5 Nm (4.4 in-lbf) and a minimum angle of rotation of 90 degrees for the battery compartment fastener mechanism, or a minimum of two full threads engaged. These requirements are important to secure the battery compartment because staff found incidents involving battery compartments with stripped screw holes or screws of insufficient length, defeating the integrity of the screw requirement and allowing child access. In particular, ASTM F963 does not contain these torque and rotation requirements for the locking mechanism, and staff identified incidents of children accessing battery compartments on toys that purportedly met ASTM F963. Accordingly, the Commission proposes to include requirements for the locking mechanism, consistent with the requirements in UL 4200A.

Moreover, all of the assessed voluntary standards, except ASTM F963–17, include a requirement for captive screws, which are screws that remain in the compartment or cover when unscrewed. If the screw is not captive to the compartment door, consumers can more easily lose the screw or defeat this locking mechanism by removing the screw, potentially for convenience, without appreciating the safety purpose of the screw.

The Commission preliminarily concludes that the requirements in UL 4200A related to products that use a tool or coin to open the battery compartment, when applied to the full scope of products subject to Reese's Law, and not just to lithium coin batteries, are adequate to address the battery compartment construction requirements related to the button cell or coin battery ingestion hazard.

Although UL 4200A includes an exception to the captive screw requirement for large panel doors, the Commission is not including such an exception in the proposed rule. Instead, we are requesting comment on this, including what constitutes a "large panel door," the types of products intended for this exception, and why these doors would not present the same risk of injury as any other consumer product that contains button cell or coin batteries if the screws become lost or discarded by the consumer.

UL 4200A and IEC 62368–1 also specify an option for the battery compartment door to require a double-action locking mechanism (requiring at least two independent and simultaneous movements to open the compartment by hand) that ASTM F963 does not contain. Unlike screws, a double-action locking mechanism does not rely on the consumer to keep and reuse a screw. Thus, a double-action lock, if well-designed and constructed, can be more secure than a screw lock that relies on consumers to reuse the screw each time the battery compartment is closed. The Commission preliminarily concludes that double-action locking mechanisms that meet the requirements of the proposed rule, which are similar to the double-action lock provisions in UL 4200A, could be effective in preventing younger children from opening the battery compartment, while affording additional flexibility to design effective child-resistant battery enclosures.

#### 2. Use and Abuse Testing

Reese's Law mandates that the rule must include performance requirements for button cell or coin battery compartments during reasonably foreseeable use or misuse of the product. Accordingly, staff evaluated use and abuse testing in each voluntary standard to address the actual hazard patterns that are apparent in the incident data. Although all of the voluntary standards reviewed by staff specify abuse tests, none of the voluntary standards, alone, would eliminate or adequately reduce the ingestion risks presented by the incident data. Based on staff's incident review, engineering analysis, and testing of consumer products as described in Tab D of Staff's NPR Briefing Package, staff assessed that the drop test and impact test in UL 4200A adequately simulate use and abuse of consumer products by children. Staff assessed that the use and abuse testing in ASTM F963–17 is inadequate, alone, to address the risk of injury, because it does not precondition the products before abuse testing and does not contain an impact test, which

is the test staff found most likely to simulate foreseeable use and abuse of consumer products.

Staff, however, also assessed that the compression tests, torque tests, and tension tests in ASTM F963–17, the toy standard, are adequate to simulate foreseeable interactions, such as when a child grasps a part of a product with fingers or teeth, and twists, pulls, or presses on part of the product, while UL 4200A and IEC 62368–1 do not contain performance requirements to address these risks. A detailed assessment of these test methods can be found in Tab D of Staff's NPR Briefing Package. Staff specifically observed the following regarding abuse testing:

- UL 4200A specifies heat pre-conditioning of plastic component parts of the product. Staff's testing demonstrated that heat pre-conditioning of the consumer products stresses plastic components to simulate more realistically, the expected condition of the product during normal use. ASTM F963 and IEC 62115 do not require heat pre-conditioning, and therefore, are inadequate to assess consistently and reliably, the integrity of battery compartments through use-and-abuse testing.

- UL 4200A specifies mechanical pre-conditioning of the product by requiring a battery compartment on a consumer product to be opened, the battery removed, the battery reinstalled, and then the compartment closed, a total of 10 times. As with heat pre-conditioning, staff's testing confirmed that mechanical pre-conditioning assesses more consistently the durability of a battery compartment to maintain its integrity over time, by preventing, for example, stripping of threads, compared to standards that do not require pre-conditioning. ASTM F963 and IEC 62115 do not require pre-conditioning by opening and closing the battery compartment, and therefore, inadequate to test reliably the durability of battery compartments on consumer products during foreseeable use and misuse.

- UL 4200A subjects "portable" products to three drops during abuse testing, while "hand-held" portable products are subjected to 10 drops. All drops are from a height of 3.3 feet in positions likely to produce the maximum force on the battery compartment. Staff assessed that the 10-cycle drop test for handheld items in UL 4200A is adequate to address and prevent incidents of breaking consumer products or battery compartments. The abuse testing requirements in ASTM F963 and IEC 62115, however, are inadequate to address the risk of button cell or coin batteries being liberated

from broken battery compartments, because they allow for as few as four drops from a height of 3 feet, in random orientations that may not exert maximum force on the battery compartment.

- UL 4200A requires three impact tests that each impart two joules of energy directly on the battery compartment with a steel ball. Staff advises that this impact test reasonably indicates the durability of the battery compartment during foreseeable use and misuse, as required by Reese's Law. However, ASTM F963 is inadequate to eliminate or adequately reduce access to batteries caused by foreseeable stress on the battery compartment, because the standard does not require impact tests directly on the compartment. IEC 62368-1 varies the required impact energy based on the type of product, and IEC 62115 requires less energy per impact, which does not adequately reduce access to the battery compartment for certain products.

- ASTM F963 specifies torque test and tension test methods to simulate interactions during reasonably foreseeable use and misuse conditions, such as a child grasping a part of the product with fingers or teeth and twisting, pulling, or pressing on the product. Staff advises that these requirements in the toy standard are adequate to test the durability and integrity of battery compartments in products with pliable materials such as shirts and greeting cards that light up or make sound using batteries. The proposed rule includes torque and tension tests to eliminate or adequately reduce the risk of ingestion in pliable products, as required by Reese's Law.

- UL 4200A specifies a compression test of 74.2 pounds over a 3.9-inch x 9.8-inch area, which staff assesses adequately addresses a child pushing on the product with hands or feet. ASTM F963 and IEC 62115 specify a concentrated compression load of 30 pounds over a 1-square-inch area, which staff assesses adequately addresses a child unintentionally opening a battery compartment that cannot be impacted directly during the drop test, but that can be pushed open with hands or fingers. However, staff advises that the smaller compression test area in ASTM F963 and IEC 62115 is inadequate to assess a child pushing on the product with hands or feet. Conversely, the larger compression area of the UL 4200A is inadequate to address the risk of injury associated with a child pushing on the product with fingers. Accordingly, the proposed rule includes both tests to address adequately the

foreseeable possible range of child interactions and incidents.

- UL 4200A specifies that if a product has a battery that is not intended to be removed or replaced by the user, and that is held fully captive by soldering, fasteners, or any equivalent means, then the product is not subject to abuse testing, and is subject only to pre-conditioning tests and secureness testing using a test hook and a force of 4.5 lb. IEC 62368-1 also excludes from abuse testing any products with non-removable batteries; but it does not require any secureness test. The Commission is aware of incidents involving children gaining access to non-removable batteries in products like computers. Although the proposed rule requires only the applicable pre-conditioning tests and the secureness test based on UL 4200A for non-removable batteries, with no additional abuse testing, the Commission requests comment on whether the proposed secureness test based on UL 4200A is sufficient to address reasonably foreseeable use and abuse of consumer products containing non-removable batteries.

### 3. Accessibility Test

Each of these four voluntary standards relies on a test probe based on a child's finger to verify whether certain components are accessible to children. Staff advises that the test probe used in ASTM F963 is inadequate to test accessibility, because the probe articulates and therefore cannot be used to apply much force. IEC 62368-1, IEC 62115, and UL 4200A do require a force to be applied with their respective probes to verify compliance with the standard. The IEC 62368-1 test probe head has a 3.5 mm (0.14 in.) radius, and compliance is verified with a force of 30 N  $\pm$  1 N (6.7 lbf  $\pm$  0.2 lbf). IEC 62115 and UL 4200A use Test Probe 11 of the Standard for Protection of Persons and Equipment by Enclosures—Probes for Verification, IEC 61032. This test probe has a head with a 4 mm (0.16 in.) radius. Staff assesses that using Test Probe 11 with a force of 50 newtons (11.2 lbf), per IEC 62115, is adequate to assess a child's ability to get into a battery compartment. The Commission seeks comments on the adequacy of the probes and accessibility tests in these voluntary standards.

## V. Assessment of Warning Label Requirements in Relevant Voluntary Standards, and Description of the Proposed Rule's Warning Label Requirements

Section 2(a)(2) of Reese's Law mandates warning label requirements for:

- The packaging of button cell or coin batteries (15 U.S.C. 2056e(a)(2)(A));
- The packaging of consumer products containing button cell or coin batteries (15 U.S.C. 2056e(a)(2)(A));
- Any literature, such as a user manual, that accompanies a consumer product containing button cell or coin batteries (15 U.S.C. 2056e(a)(2)(B));
- As practicable, a consumer product that contains button cell or coin batteries in a manner visible to the consumer upon installation or replacement of the button cell or coin battery (15 U.S.C. 2056e(a)(2)(C)(i)); and
- As practicable, a product for which the battery is not intended to be replaced or installed by the consumer, in a manner that is visible to the consumer upon access to the battery compartment; if it is impracticable to label the product, this information shall be placed on the packaging or instructions (15 U.S.C. 2056e(a)(2)(C)(ii)).

The warning labels required by section 2(a) of Reese's Law must (1) clearly identify the hazard of ingestion, and (2) instruct consumers, as practicable, to keep new and used batteries out of the reach of children, to seek immediate medical attention if a battery is ingested, and to follow any other consensus medical advice. 15 U.S.C. 2056e(b).

Tab C of Staff's NPR Briefing Package reviews and assesses warning label requirements in existing voluntary standards, and provides recommendations for warnings with a detailed rationale for each recommended requirement. This section discusses and proposes to adopt staff's recommended implementation of Reese's Law's warning label requirements.

### A. Adequacy of Existing Voluntary Standards

To fulfill the requirement in section 2(d) of Reese's Law, the Commission first considers whether the labeling requirements in an existing voluntary standard meet the requirements of section 2(a)(2) and 2(b) of Reese's Law. Tab C of Staff's NPR Briefing Package and its Appendix contain a detailed analysis of the warning label requirements in 10 voluntary standards associated with button cell or coin

batteries. For each standard, staff considered the scope, placement, format, and content of the required labels, and whether it adequately

addresses the ingestion hazard warnings required by Reese's Law. Table 10 summarizes staff's assessment of the voluntary standards relevant to labeling

of consumer products that contain button cell or coin batteries.

**TABLE 10—SUMMARY OF STAFF'S ASSESSMENT OF LABELING REQUIREMENTS IN STANDARDS FOR CONSUMER PRODUCTS CONTAINING BUTTON CELL OR COIN BATTERIES**

	ASTM F963	UL 4200A	ASTM F2999–19	ASTM F2923–20	IEC 62115
<i>Scope:</i>					
Battery Chemistry Type .....	All .....	Lithium .....	All .....	All .....	All.
Product Type .....	Toys .....	All .....	Jewelry .....	Children's Jewelry.	Toys.
<i>Labeling:</i>					
On Consumer Product Packaging .....	I .....	.....	.....	.....	I
In instructions or accompanying literature .....	I .....	I .....	.....	.....	I
On consumer product .....	.....	I .....	.....	.....	

Blank—Does not address requirements, I—Inadequately addresses requirements, A—Adequately addresses requirements.

Table 11 summarizes staff's assessment of the voluntary standards

relevant to labeling of packaging for button cell or coin batteries.

**TABLE 11—SUMMARY OF STAFF'S ASSESSMENT OF LABELING REQUIREMENTS IN STANDARDS FOR BATTERIES**

	ANSI C18.1M	ANSI C18.3M	UL 1642	IEC 60086–4	IEC 60086–5
<i>Scope:</i>					
Battery Chemistry Type .....	Aqueous .....	Lithium .....	Lithium .....	Lithium .....	Aqueous.
<i>Labeling:</i>					
On batteries * .....	I .....	I .....	.....	I .....	I
On battery packaging .....	I .....	I .....	I .....	I .....	I
In instructions or accompanying literature .....	.....	I .....	.....	.....	

Blank—Does not address requirements, I—Inadequately addresses requirements, A—Adequately addresses requirements.

\* Not directly addressed by Reese's Law.

As reflected in Table 10 and explained more fully in Tab C of Staff's NPR Briefing Package and its Appendix, none of the voluntary standards relevant to consumer products that contain button cell or coin batteries have a scope that includes all consumer products. For example, the warnings required in ASTM F963 are limited to toys, and they also do not address spare batteries included with a consumer product. For UL 4200A, the required warnings do not use ANSI formatting and do not clearly warn of an ingestion hazard; this standard requires warning of a "chemical burn" without informing consumers how this hazard can occur. IEC 62115 permits a "Contains coin battery" symbol on the product packaging, but it does not instruct consumers to "Keep out of reach of children" on the packaging, instructions, or product. ASTM F2999–19 and ASTM F2923–20, for jewelry, do not satisfy any of the labeling requirements of Reese's Law.

Table 11 summarizes staff's assessment that the voluntary standards' labeling requirements for battery packaging, likewise, do not satisfy

Reese's Law. As reflected in Table 11 and explained more fully in Tab C of Staff's NPR briefing package and its Appendix, none of the voluntary standards relevant to button cell or coin batteries have a scope that includes all button cell or coin batteries for which the ingestion hazard applies. Warnings in ANSI C18.1M and IEC 60086–5 are limited to aqueous battery chemistries (including alkaline batteries), while ANSI C18.3M, UL 1642, and IEC 60086–4 are limited to lithium battery chemistries. Each of the relevant standards addresses warnings on battery packaging, but do not contain requirements specifically addressing the contents in Reese's Law. For example, ANSI C18.3M contains two statements relevant to the ingestion hazard: "Keep batteries out of the reach of children, especially those batteries fitting within the limits of the truncated cylinder," in section 8.4; and "Immediately seek medical attention if a cell or battery has been swallowed. Also, contact your local poison control center," in section 8.5. However, the section containing these two statements provides manufacturers with information

regarding safe use of lithium batteries, and does not require the statements to be placed on packaging. Additional warning statements similar to those in section 8.4 and section 8.5 can be found in Annex C, but are only required for lithium coin cells 16 mm in diameter and larger.

Based on CPSC staff's review and analysis of voluntary standards and for the reasons summarized above, the Commission determines preliminarily that no existing voluntary standard contains the warnings required by Reese's Law, for either consumer products containing button cell or coin batteries, or the packaging of such batteries. Although no standard, alone, contains labeling requirements that are adequate to satisfy Reese's Law section 2, the standards collectively contain elements that can be combined to establish succinct warnings that address the ingestion hazard associated with button cell or coin batteries. Accordingly, as discussed below, the labeling requirements in the proposed rule are based on elements of several voluntary standards.

### B. Formatting Requirements for Warning Labels

The warning labels in the proposed rule follow requirements found in ANSI Z535.4, American National Standard Product Safety Signs and Labels, which is the primary voluntary consensus standard providing guidelines for the design of safety signs and labels for application to consumer products. The ANSI Z535.4 standard includes recommendations for the design, application, use, and placement of warning labels, such as including the signal word, “WARNING,” and the safety alert symbol of an equilateral triangle surrounding an exclamation mark. The following format requirements, drawn from this ANSI standard, apply to all warning labels in the NPR:

1. All warnings must be clearly visible, prominent, legible, and permanently marked.
2. Warnings must be in contrasting color to the background onto which they are printed.
3. Warnings must be in English.
4. The safety alert symbol, an exclamation mark in a triangle, when used with the signal word, must precede the signal word. The base of the safety alert symbol must be on the same horizontal line as the base of the letters of the signal word. The height of the safety alert symbol must equal or exceed the signal word letter height.
5. The signal word “WARNING” must be in black letters on an orange background. The signal word must appear in sans serif letters in upper case only.

6. Certain text in the message panel must be in bold and in capital letters, as shown in the example warning labels, to get the attention of the reader.

7. For labels that are provided on a sticker, hangtag, instructions, or manual, the safety alert symbol and the signal word “WARNING” must be at least 0.2 in. (5 mm) high. The remainder of the text must be in characters whose upper case must be at least 0.1 in. (2.5 mm), except where otherwise specified.

8. For labels that are required to be on the packaging of button cell and coin batteries, on the packaging of consumer products containing such batteries, and directly on consumer products, text size must be dependent on the area of the principal display panel. Text size must be determined based on Table 12, which is based on the information found in 16 CFR 1500.19(d)(7).

TABLE 12—LETTER SIZE FOR WARNING LABELS: INFORMATION BASED ON 16 CFR 1500.19(d)(7)

Letter size measurements in inches								
Display Area: Inches <sup>2</sup>	0–2	+2–5	+5–10	+10–15	+15–30	+30–100	+100–400	+400
Signal word (WARNING) .....	3/64	1/16	3/32	7/64	1/8	5/32	1/4	1/2
Statement of Hazard .....	3/64	3/64	1/16	3/32	3/32	7/64	5/32	1/4
Other Text .....	1/32	3/64	1/16	1/16	5/64	3/32	7/64	5/32

Letter size measurements in cm (for reference only)								
Display Area: cm <sup>2</sup>	0–13	+13–32	+32–65	+65–97	+97–194	+194–645	+645–2,581	+2,581
Signal word (WARNING) .....	0.119	0.159	0.238	0.278	0.318	0.397	0.635	1.270
Statement of Hazard .....	0.119	0.119	0.159	0.238	0.238	0.278	0.397	0.635
Other Text .....	0.079	0.119	0.159	0.159	0.198	0.238	0.278	0.397

Placement of labels on packaging of button cell or coin batteries, consumer product packaging, and on consumer products, as set forth in the proposed rule, rely on the following definitions:

- The “principal display panel” is defined as the display panel for a retail package of button cell or coin batteries or retail package of a consumer product containing such batteries that is most likely to be displayed, shown, presented, or examined under normal or customary conditions of display for retail sale. The principal display panel is typically the front of the package.

- The “secondary display panel” means a display panel for a retail package of a button cell or coin batteries or retail package of a consumer product containing such batteries that is opposite or next to the principal display panel. The secondary display panel is typically the rear or side panels of the package.

- The “product display panel” means the surface area on, near, or in the battery compartment. For consumer products with replaceable button cell or coin batteries, the product display panel must be visible while a consumer installs or replaces the button cell or

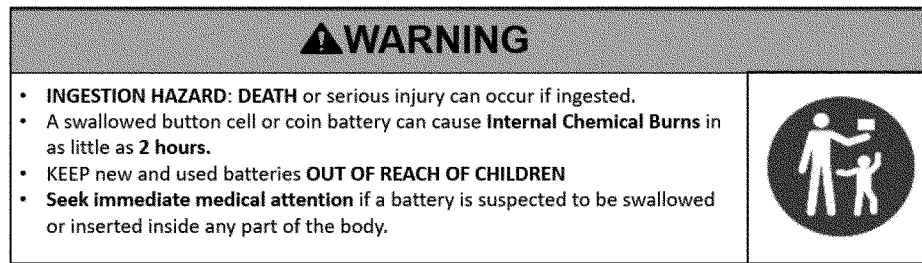
coin battery. For consumer products with nonreplaceable button cell or coin batteries, the product display panel must be visible upon access to the battery compartment.

### C. Required Warnings for Button Cell or Coin Battery Packaging

Using the foregoing formatting requirements, the proposed rule requires a warning for the principal display panel of the battery packaging, shown in Figure 4, that meets the requirements in section 2 of Reese’s Law.

**BILLING CODE 6355–01–P**

Figure 4. Warning of Ingestion Hazard for Battery Packaging.



Accordingly, battery packaging must include the following warnings statements:

- “INGESTION HAZARD: DEATH or serious injury can occur if ingested.” This sentence identifies the hazard of ingestion, as required by section 2(b)(1) of Reese’s Law.
- “A swallowed button cell or coin battery can cause Internal Chemical Burns in as little as 2 hours.” This sentence provides warning label requirements, as stated in Reese’s Law; an effective warning should have an explanation of how and why ingestion of a button cell or coin battery is hazardous.
- “KEEP new and used batteries OUT OF REACH OF CHILDREN.” This

sentence implements language in section 2(b)(2) of Reese’s Law. In addition, use of the icon recognized for keeping items out of children’s reach is intended to quickly convey the required message and direct the reader’s attention to the label. The icon incorporated with the warning must be at least 8 mm (0.31 in.) in diameter for visibility. Text size must be calculated per Table 12.

- “Seek immediate medical attention if a battery is suspected to be swallowed or inserted inside any part of the body.” This sentence implements language in section 2(b)(2) of Reese’s Law and informs the consumer what actions should be taken if a button cell or coin

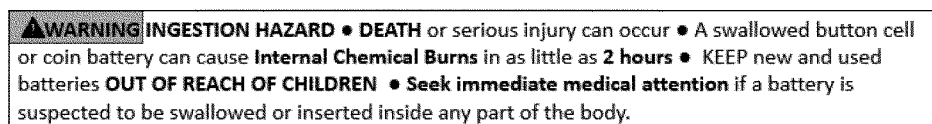
battery is ingested or inserted into any part of the body. The warning includes the term “inserted” because insertions into the nose can be aspirated into the trachea and lead to ingestion, with the same risk of injury as oral ingestion.

If space prohibits the full warning with the icon shown in Figure 4 in accordance with the formatting requirements of Table 12, packaging is required to use the “Keep out of Reach” icon (Figure 5) on the principal display panel and the warning text must be placed on the secondary display panel, as shown in Figure 6. The icon must be at least 20 mm (0.79 in.) in diameter for visibility.

Figure 5. “Keep Out of Reach” Icon



Figure 6. Warning Text Without Icon.



To address the hazard of button cell or coin batteries that become loose or separated from packaging, and to provide critical safety-related information should an ingestion incident occur, the following information implementing section 2(b)(2) of Reese’s Law must be placed on the secondary display panel of the packaging:

- (1) “Keep in original package until ready to use.” This statement instructs consumers to leave the batteries in child-resistant packaging as a specific

means of keeping new batteries out of the reach of children.

- (2) “Immediately dispose of used batteries and keep away from children. Do NOT dispose of batteries in household trash.” This statement instructs consumers on how to prevent ingestion hazards from used batteries by keeping used batteries out of the reach of children, including out of household trash.

- (3) “Call a local poison control center for treatment information.” This statement makes more actionable the guidance to “immediately seek medical

attention” as described in section 2(b)(2) of Reese’s Law, and provides consumers with a resource for obtaining medical advice suitable to their situation.

#### *D. Required Warnings for Button Cell or Coin Batteries Included Separately With the Consumer Product*

Button cell or coin batteries included with a consumer product, but not yet installed in the product, must contain the warning label in Figure 4 on the principal display panel. If space does not allow the full warning consistent with the formatting requirements of

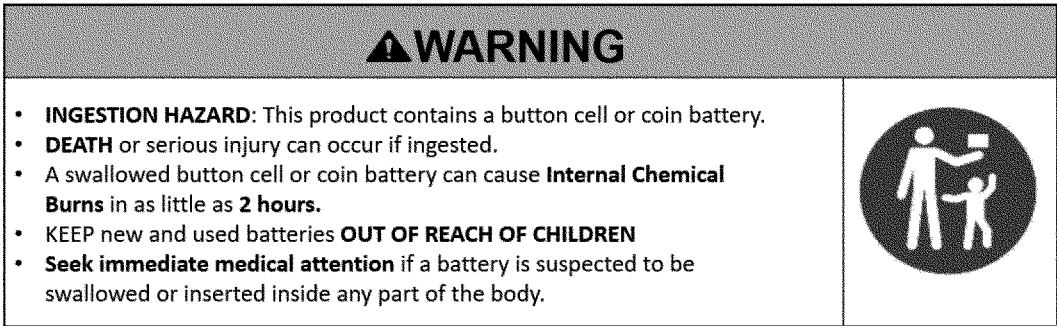


Table 12, then the icon shown in Figure 5 must be placed on the principal display panel with the text shown in Figure 6 on the secondary display panel, and the icon must be at least 20 mm in diameter for visibility. The goal is to ensure consumers have the opportunity to see the appropriate safety-related warning information and take appropriate action to store spare batteries safely away from children until installed in a consumer product.

*E. Required Warnings for Packaging of Consumer Products That Contain Button Cell or Coin Batteries*

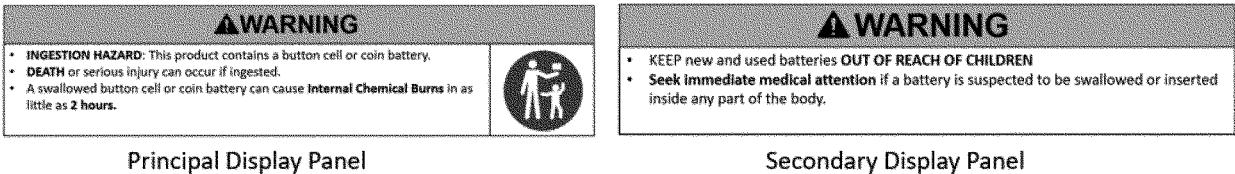
Reese’s Law requires warning labels on the packaging of consumer products containing button cell or coin batteries. Each warning label must contain the same wording and icon as the battery packaging, except to make the first warning more explicit about the hazard: “INGESTION HAZARD: This product contains a button cell or coin battery.” The warning shown in Figure 7 must be on the principal display panel of the consumer product packaging. Covered consumer products that do not include packaging must affix the warning to the product with a hang tag or sticker label.

Figure 7. Warning for consumer product packaging to indicate the presence of button cell or coin battery and the ingestion hazard.



Product packaging that does not have the space to permit the full warning as indicated in Table 12, must include an abbreviated warning on the principal display panel, with the remaining statements (“KEEP new and used batteries OUT OF REACH OF CHILDREN” and “Seek immediate medical attention if a battery is suspected to be swallowed or inserted inside any part of the body”) placed on the secondary display panel, as shown in Figure 8. The icon must be at least 8 mm (0.31 in.) in diameter for visibility. Text size must be calculated per Table 12.

Figure 8. Abbreviated warning if the consumer product packaging does not have space for the full warning on the front.



*F. Required On-Product Warnings for Consumer Products That Contain Button Cell or Coin Batteries*

Reese’s Law requires, as practicable, warnings directly on the consumer product that contains button cell or coin batteries. A consumer product must be permanently marked with an ingestion warning on the product display panel. The warning in Figure 9 must be used:

Figure 9. On-product warning label.



If space on the product does not allow the full warning text shown in Figure 9 in accordance with Table 12, then the product must display the internationally recognized: “Warning: contains coin battery” icon, as shown in Figure 10, which is permitted without text.

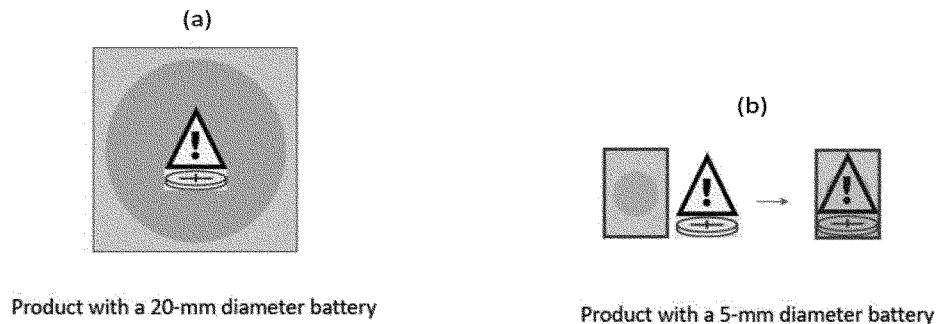
**Figure 10. Safety Alert Symbol to Indicate “Warning: Contains coin battery”**



See Staff’s NPR Briefing Package at Tab C. For visibility, the icon must be at least 7 mm (0.28 in.) in width and 9 mm (0.35 in.) in height and must be on the product display panel and must be in yellow with black outlines, as shown in Figure 10. The icon must be defined in accompanying printed materials, such as instructions, manual, insert, or hangtag.

Figure 11 illustrates the scaled version of this icon on a product containing a battery, with a 20 mm (0.79 in.) diameter, as well as a scaled version with a 5 mm (0.20 in.) diameter.

**Figure 11. (a) 20mm diameter battery and icon, (b) 5 mm (0.20 in.) battery and icon**



Based on staff’s assessment, we tentatively find that virtually all consumer products can accommodate either the full warning or one of the scaled icons, and we seek comment on that conclusion. However, if the product is too small to include any of the warnings in Figures 9–11, the product is required to:

1. have packaging containing the warning (see requirements for consumer product packaging), or
2. have a hangtag or sticker label with the full warnings, as shown in Figure 7.

#### *G. Required Warnings for Instructions/ Manuals Accompanying Consumer Products*

Instructions and manuals for consumer products that contain button cell or coin batteries, if they exist, must contain the full warning label text required for button cell or coin battery packaging, as shown in Figure 7, as well as the three statements implementing section 2(b)(2) of Reese’s Law to address the hazard of button cell or coin batteries that become loose or separated from packaging, which provide critical safety-related information should an ingestion incident occur:

- “Immediately dispose of used batteries and keep away from children. Do NOT dispose of batteries in household trash.”
- “Even used batteries may cause severe injury or death.”
- “Call a local poison control center for treatment information.”

If instructions or manuals are not provided with the consumer product, this information must be present on the principal display panel or the secondary display panel of the consumer product packaging, or if there is no consumer product packaging, the accompanying hang tag or sticker label. This ensures that the consumer has the opportunity to see the appropriate safety-related information, even when a consumer product that uses a button cell or coin battery is not sold with a button cell or coin battery.

#### **VI. Required Notifications to Purchasers**

In addition to the required warnings specified in Reese’s Law, and pursuant to the Commission’s independent authority under section 27(e) of the CPSA, the proposed rule requires delivery of technical and performance data to purchasers. These notifications

will improve safety communication to consumers for the same products subject to the proposed requirements discussed above, and based on the same hazard assessment. Because these proposed notification requirements rest on legal authority independent of Reese’s Law, adopting them is not inconsistent with Reese’s Law’s specification that the *safety rule promulgated pursuant to section 2 of that statute* “shall only contain” the provisions listed by Congress. 15 U.S.C. 2056e(a). For ease of understanding and administration, however, we propose to integrate the text of the notification requirements established under section 27(e) with the warning requirements established in the safety rule under Reese’s Law.

#### *A. Websites or Applications That Enable Consumers To Purchase Products Online*

Consumers should be able to view battery-related safety information when purchasing products online. Otherwise, consumers would not be exposed to the warnings until they receive the physical product. Learning of the hazard associated with button cell or coin batteries at the time the consumer is searching for product information and

making purchasing decisions may influence those purchasing decisions or the actions taken to protect children against the hazard. Therefore, pursuant to its authority under section 27(e) of the CPSA, the Commission is proposing point-of-sale warning requirements for websites or other internet presence that manufacturers (including importers, per CPSA section 3(a)(11), 15 U.S.C. 2052(a)(11)) use to allow consumers to purchase these products.

Specifically, online sales materials must include the warning in Figure 7 for purchases of button cell or coin batteries, and the warning in Figure 9 for purchases of consumer products containing button cell or coin batteries. The warning must be clearly visible, prominent, and legible next to the product description or near the product image or near the product price.

#### *B. Other Battery Safety Information on the Battery Packaging and Consumer Product Packaging*

In addition to the ingestion hazard warning, the proposed rule requires other safety-related information on the battery packaging and consumer product packaging. To reduce battery leakage, fire, and/or explosion hazards that could lead to personal injury, consumers should be aware of, and have ready access to, technical information about safe handling and use of button cell and coin batteries, as well as the characteristics of the batteries themselves. Therefore, we propose the following additional safety information under the authority in section 27(e) of the CPSA:

##### *1. Battery packaging.*

(4) Battery type (e.g., LR44, CR2032).

(5) Battery chemistry (e.g., silver oxide button or lithium)

(6) Nominal voltage.

Having battery type, chemistry, and voltage on the packaging constitutes performance and technical data that may help identify the battery if an ingestion is suspected. If a button cell or coin battery is ingested, knowing this information could assist medical providers to assess the severity of the risk of injury, and to treat the patient accordingly. For example, lithium button cell or coin batteries are associated with a higher likelihood of injury or death, in part, because they have a greater voltage than other button cell or coin batteries. The compatible battery type and voltage information on the product packaging will also help consumers avoid hazards associated with using incompatible batteries, such as leakage, fire, and/or explosion hazards. In addition, this statement will assist consumers in selecting the correct

type of battery for the product, reducing the likelihood that incorrect battery cells will be taken from their secure packaging and left loose and accessible to children.

(7) Year and month or week of manufacture or expiration date.

(8) Name or trademark of the manufacturer or supplier.

Identification of manufacture date and other manufacturer information is technical data that may facilitate recalls resulting from ingestion of button or coin batteries.

- “Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.”

Mixing batteries can contribute to battery leakage, fire, and/or explosion hazards that could lead to personal injury. In addition, this statement will inform the consumer to use the correct type of battery cell that is called for use in the product, reducing the likelihood that incorrect battery cells will be taken from their secure packaging and left loose and accessible to children.

- “Ensure the batteries are installed correctly according to polarity (+ and -).”

Batteries installed with the wrong polarity can leak or explode. Also, incorrect installation may result in the consumer removing the batteries to install another set of batteries, creating loose batteries.

- “Remove and immediately discard batteries from equipment not used for an extended period of time.”

This statement is intended to ensure that consumers immediately dispose of batteries in unused products, because if left for an extended period, these batteries can leak, discharge, or explode unexpectedly, creating risks of injury. Furthermore, used button cell or coin batteries may have sufficient energy to cause damage if ingested.

- “Non-rechargeable batteries are not to be recharged.”

Placing non-rechargeable batteries in a charger can cause battery leakage, fire, and/or exploding hazards. This statement is intended to ensure that consumers do not attempt to recharge non-rechargeable batteries, or leave used batteries accessible to children with the intention of recharging them.

- “Do not force discharge, recharge, disassemble, heat above (manufacturer’s specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.”

This statement warns against actions that may result in external injuries from chemical burns. Damaged button cell or

coin batteries also can leak toxic chemicals that poses a risk if ingested.

##### *2. Consumer product packaging or accompanying hang tag or sticker label.*

Also pursuant to section 27(e) of the CPSA, the principal display panel or the secondary display panel of the consumer product packaging, or if there is no consumer product packaging, the accompanying hang tag or sticker label, must include the following:

- Products with non-replaceable batteries must include a statement indicating the product contains non-replaceable batteries. If a consumer attempts to replace a non-replaceable battery, this action may damage the consumer product or the battery, and contribute to battery leakage, fire and/or explosion hazards. This may also cause the original or the replacement battery to become accessible, contributing to the ingestion hazard.

The following additional requirements were previously described for battery packaging, and for the same reasons are also required on either the principal display panel or secondary display panel of the consumer product packaging, or in the absence of consumer product packaging, on the accompanying sticker or hangtag:

(9) Battery type (e.g., LR44, CR2032).

- Nominal voltage.

##### *3. Instructions and manuals:*

Likewise, under the authority of CPSA section 27(e), instructions and manuals, when provided with consumer products must include the following additional battery safety-related information that is also required on the battery packaging:

- Battery type (e.g., LR44, CR2032).

- Nominal voltage.

- “Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.”

- “Remove and immediately discard batteries from equipment not used for an extended period of time.”

- “Non-rechargeable batteries are not to be recharged.”

- “Do not force discharge, recharge, disassemble, heat above (manufacturer’s specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.”

If instructions or manuals are not provided with the consumer product, this information must be present on the principal display panel or the secondary display panel of the consumer product packaging, or if there is no consumer product packaging, the accompanying hang tag or sticker label. This ensures that the consumer has the opportunity to see the appropriate safety-related

information, even when a consumer product that uses a button cell or coin battery is not sold with a button cell or coin battery.

*C. Request for Comment on Requiring a Warning Icon on Button Cell or Coin Batteries*

Reese's Law does not require marking or labeling regarding the ingestion hazard directly on button cell or coin batteries. However, the voluntary standard ANSI C18.3M advises to durably and indelibly mark coin cells with the "Keep Out of Reach" icon, with a minimum icon size of 6 mm in diameter. In accordance with Reese's

Law, the Commission recommends the "Keep Out of Reach" icon be used in conjunction with warning labels on battery and consumer product packaging to quickly convey the required message and direct the reader's attention to the warning label. CPSC staff advises that requiring button cell or coin batteries that are visible within the packaging at the point of sale to have the "Keep Out of Reach" icon will further remind the consumer of the ingestion hazard, and direct attention to the icon and warning label on the battery packaging. Additionally, placing the "Keep Out of Reach" icon on button

cell or coin batteries would continue to inform consumers of the ingestion hazard posed by the battery at all stages of its lifecycle, including while it is in battery packaging, when placed in a consumer product, or when loose.

The Commission requests comment on whether the rule should require button cell or coin batteries to be durably and indelibly marked with the "Keep Out of Reach" icon where size permits, at a minimum size of 6 mm in diameter, and if so, whether the appropriate legal authority is Reese's Law, section 27(e) of the CPSA, or another statute.

**Figure 12. "Keep out of Reach" Icon Etched onto Battery**



## VII. Description of the Proposed Rule

As noted, we propose for the sake of clarity, convenience, and consistency to integrate the rule text adopted under Reese's Law with that adopted under the separate authority of CPSA section 27(e), using the same definitions and exceptions for the section 27(e) requirements as for the requirements based on Reese's Law. Below, we describe the resulting provisions of proposed 16 CFR part 1263.

### A. Section 1263.1 Scope, Purpose, Effective Date, Units, and Exemption

Proposed § 1263.1(a) explains the scope and purpose of the safety standard required by Reese's Law. 15 U.S.C. 2056e, Public Law 117–171. Reese's Law requires a rule intended to eliminate or adequately reduce the risk of injury and death to children 6 years old and younger from ingesting button cell or coin batteries. Based on section 2 of Reese's Law, the scope of the proposed rule includes consumer products that contain, or are designed to use, button cell or coin batteries, the packaging of such consumer products and accompanying literature, and the packaging of button cell or coin batteries.

Section 2(a) of Reese's Law requires performance requirements for child-resistant button cell or coin battery compartments during reasonably foreseeable use and misuse of consumer

products that use such batteries. Proposed § 1263.1(a) also explains that Reese's Law provides warning label requirements for packaging containing button cell or coin batteries, packaging of consumer products containing such batteries, consumer products, and instructions and manuals accompanying consumer products. The proposed rule also explains that the Commission will require point-of-sale notification of performance and technical data under the Commission's authority in section 27(e) of the CPSA, 15 U.S.C. 2076(e).

Section 1263.1(b) describes the effective date of the proposed rule. Consistent with section 6 of Reese's Law (15 U.S.C. 2056e Notes), the rule proposes that all consumer products and packaging containing button cell or coin batteries that are subject to the proposed rule, and that are manufactured or imported after the proposed effective date of 180 days following publication of the final rule in the **Federal Register**, must comply with the requirements of this part.

Section 1263.1(c) provides that values stated without parentheses are the requirement, while values in parentheses are approximate values. This proposal is consistent with UL 4200A. Section 1263.1(d) sets forth the statutory exemption for toys that meet the mandatory toy standard in section 4 of Reese's Law, proposing that "any object designed, manufactured, or

marketed as a plaything for children under 14 years of age that is in compliance with the battery accessibility and labeling requirements of 16 CFR part 1250, Safety Standard Mandating ASTM F963 for Toys, is exempt from the requirements of this part." See 15 U.S.C. 2056e Notes.

Because section 2(a) of Reese's Law directs the Commission to adopt a rule addressing the risk of injury from ingestion, and because the purpose of the proposed rule is to address the ingestion hazard associated with button cell or coin batteries, proposed § 1263.1(e) states that button cell or coin batteries that the Commission has determined do not present an ingestion risk are not subject to this proposed rule. The proposal applies to zinc-air button cell or coin batteries.

### B. Section 1263.2 Definitions

Proposed § 1263.2 describes the definitions used for this consumer product safety rule and notification requirements. The proposed rule explains that in addition to the definitions given in section 3 of the Consumer Product Safety Act (15 U.S.C. 2052) and the definitions in section 5 of Reese's Law (15 U.S.C. 2056e Notes), the Commission proposes to add eight definitions that specifically apply to this proposed rule. The definitions are listed in the proposed rule in alphabetical order.

*Accessible and Accessibility Probe.* As described in section VII.C, the proposed performance requirements for battery compartments require that after use-and-abuse testing, a button cell or coin battery must not become accessible to children. The proposed rule measures accessibility using a test probe. Accordingly, proposed § 1263.2 defines the required test probe, stating that an “accessibility probe” means “Test Probe 11 in IEC 61032 Protection of Persons and Equipment by Enclosures—Probes for Verification.” Similarly, proposed § 1263.2 defines “accessible” to mean that the tests probe is “able to be contacted by the accessibility probe.” This means a battery is accessible if the test probe can touch a button cell or coin battery. Specifying the test probe and the definition of “accessible” in the proposed rule is intended to assist those who test consumer products to test consistently and reliability for the accessibility of button cell or coin batteries during testing to the standard.

*Button Cell or Coin Battery.* Proposed § 1263.2 restates the statutory definition of a “button cell or coin battery” in section 5 of Reese’s Law. 15 U.S.C. 2056e Notes. A “button cell or coin battery” means “(1) a single cell battery with a diameter greater than the height of the battery; or (2) any other battery, regardless of the technology used to produce an electrical charge, that is determined by the Commission to pose an ingestion hazard.” *Id.* For this proposed rule, the Commission is focusing on addressing button cell and coin batteries under part (A) of the definition, because other batteries where the diameter is less than the height, such as AAA cylindrical batteries, do not pose the same type of ingestion hazard as button cell or coin batteries. For example, cylindrical batteries can pose a choking hazard, and CPSC is aware that consumers have ingested cylindrical batteries; however, the medical literature shows that injury or death due to ingestion of a cylindrical battery is rare. Consequently, the Commission is not including cylindrical batteries in the proposed rule at this time, but will expect staff to continue to monitor battery ingestion data. If CPSC becomes aware of a serious ingestion hazard associated with another battery type, section 2(g) of Reese’s Law allows the Commission to undertake additional rulemaking to address the hazard at any time. 15 U.S.C. 2056e(g).

*Consumer product containing button cell or coin batteries.* Proposed § 1263.2 contains the statutory definition of a “consumer product containing button cell or coin batteries” from section 5 of Reese’s Law. 15 U.S.C. 2056e Notes. The

Commission preliminarily interprets this definition as providing that these consumer products include consumer products that are sold with a button cell or coin battery, and consumer products that are sold without a battery but are designed to use one or more button cell or coin batteries, regardless of whether such batteries are intended to be replaced by the consumer or are included with the product or sold separately.

*Ingestion Hazard.* Proposed § 1263.2 describes the “ingestion hazard” addressed by the proposed rule. Based on a review of the medical literature, CPSC incident data, and data from the NCPIC, an ingestion hazard is caused when a button cell or coin battery becomes lodged in the body, and can potentially cause death or serious injury through choking, generation of hazardous chemicals, leaking of hazardous chemicals, electrical burns, pressure necrosis, or other means.

*Principal Display Panel and Secondary Display Panel.* Proposed § 1263.2 also explains what a “principal display panel” means to aid in understanding the required placement of warning statements on consumer product and button cell or coin battery packaging. The proposed rule explains that a “principal display panel” is typically on the front of the retail package of button cell or coin batteries or consumer products containing such batteries. The principal display panel is the panel most likely to be displayed, shown, presented, or examined under normal or customary conditions of display for retail sale. This definition assists in distinguishing the principal display panel from the proposed definition of a “secondary display panel,” described as a “display panel for a retail package of button cell or coin batteries or retail package of a consumer product containing such batteries that is opposite or next to the principal display panel. The secondary display panel is typically the rear or side panels of the package.”

*Product Display Panel.* Finally, proposed § 1263.2 describes a “product display panel” to differentiate the surface of a consumer product battery compartment, as opposed to the packaging of button cell or coin batteries and the packaging of consumer products that contain such batteries. A product display panel is:

the surface area on, near, or in the battery compartment. For consumer products with replaceable button cell or coin batteries, the product display panel must be visible while a consumer installs or replaces the button cell or coin battery. For consumer products with nonreplaceable button cell or coin

batteries, the product display panel must be visible upon access to the battery compartment.

The intent of this definition is to inform industry that warnings on a product display panel must be located where a consumer will see the warning when interacting with the battery compartment, as required in section 2(a)(2)(C) of Reese’s Law. 15 U.S.C. 2056e(a)(2)(C).

### *C. Section 1263.3 Requirements for Consumer Products Containing Button Cell or Coin Batteries*

The primary way that children access button cell or coin batteries and then ingest them is by accessing batteries from a consumer product. Accordingly, as required by section 2(a) of Reese’s Law, the proposed rule would establish performance requirements for child-resistant button cell or coin battery compartments on consumer products during reasonably foreseeable use and misuse. Performance requirements are based on staff’s incident review, engineering analysis, testing of consumer products, and assessment that none of the relevant voluntary standards meet the risk reduction and warning requirements of Reese’s Law sections 2(a) and (d). The proposed rule is based on the provisions of several existing voluntary standards, including UL 4200A–21, IEC 62368–1, and ASTM F963–17 (as codified in 16 CFR part 1250). Performance requirements in the proposed rule would apply to consumer products containing button cell or coin batteries with replaceable and non-replaceable batteries.

*General Requirements.* Proposed § 1263.3(a) contains general requirements for consumer products containing button cell or coin batteries. This section explains that, in general, consumer products containing button cell or coin batteries must meet the performance and labeling requirements in the proposed rule to minimize the risk of children accessing and ingesting button cell or coin batteries.

*Performance requirements for consumer products containing button cell or coin batteries that are removable.* Proposed § 1263.3(b) describes the specific performance requirements for consumer products containing button cell or coin batteries that are removable. A removable or replaceable button cell or coin battery in a consumer product cannot be made accessible, meaning able to be contacted with the accessibility probe, when tested to § 1263.3(d); must meet the performance tests in § 1263.3(e); and must require a tool, such as a screwdriver or coin, to open, or be secured using an enclosure

that requires a minimum of two independent and simultaneous hand movements to open (a double-action locking mechanism).

The proposed rule also requires that battery compartments secured by one or more screws, or a twist-on access cover, meet a test for minimum torque (0.5 Nm (4.4 in-lb)) and minimum angle of rotation (90 degrees), or the fastener(s) must engage a minimum of two full threads. Moreover, screws or fasteners used to secure the battery compartment enclosure must be captive to the compartment door, cover, or closure. Unlike UL 4200A and IEC 62368–1, the proposed rule does not exclude from the requirement for captive screws large panel doors leading to button cell or coin battery compartments. CPSC requests comment on the rationale for such an exception and the types of products to which it should apply, if adopted.

*Performance requirements for consumer products containing button cell or coin batteries that are non-removable.* Proposed § 1263.3(c) explains that consumer products containing button cell or coin batteries not intended for removal or replacement must be made inaccessible by using a battery compartment enclosure that complies with the performance requirements of § 1263.3(b), meaning secured in a compartment that meets the same requirements as removable button cell or coin batteries, or by securing a button cell or coin battery compartment using soldering, fasteners such as rivets, or equivalent means, that passes the *Secureness Test* in § 1263.3(f).

*Accessibility test method.* Proposed § 1263.3(d) assesses whether a child can access a button cell or coin battery installed in a consumer product by determining whether the specified accessibility probe can make contact with a button cell or coin battery. If children can touch the battery, then they may be able to remove the battery, leading to a potential ingestion. The test method requires that any part of the battery compartment enclosure that can be opened or removed without a tool, and with fewer than two independent and simultaneous movements (e.g., a zipper or hook and loop), be removed (§ 1263.3(d)(1)). The test method also states that if any part of the battery compartment is protected by pliable materials, such as fabric, paper, foam, or vinyl, or a seam, the tester must first apply the Tension Test for Seams in Stuffed Toys and Beanbag-Type Toys in 16 CFR part 1250, to determine whether the battery compartment enclosure can become exposed or accessible, using the specified force of 70.0 N (15.7 lbf)

(§ 1263.3(d)(2)). The test method instructs that if during this assessment a new part of the battery compartment enclosure becomes exposed or accessible, the tester must repeat the test in § 1263.3(d)(1), and the test in paragraph (d)(2), until no new part of the battery compartment enclosure becomes exposed or accessible, and then conduct the test in § 1263.3(d)(3).

The test in § 1263.3(d)(3) instructs the tester to insert or apply the accessibility probe to any depth that a battery compartment opening will permit, and rotate or angle the accessibility probe before, during, and after insertion or application through the battery compartment opening to any position that is necessary to determine whether the probe can contact the button cell or coin battery. This test is intended to simulate a child attempting to reach a button cell or coin battery installed in the consumer product; however, this test is not intended to judge the strength of the material comprising the battery compartment. Testers should use the minimum force necessary to determine whether the accessibility probe can contact a button cell or coin battery installed in the consumer product.

*Performance tests for consumer products containing button cell or coin batteries.* Proposed § 1263.3(e) states that testers should first conduct the required pre-conditioning steps in § 1263.3(e)(1) before testing consumer products to the performance requirements in § 1263.3(e)(2) (for products with replaceable battery compartments), and § 1263.3(f) (for products with accessible non-replaceable batteries). Testers are also instructed to perform pre-conditioning and performance requirements in the order presented in the proposed rule.

*Performance test: Pre-conditioning: Stress Relief.* Proposed § 1263.3(e)(1) requires each test sample of a consumer product to be pre-conditioned prior to conducting the applicable performance tests. The first pre-conditioning step, § 1263.3(e)(1)(i), is “stress relief” and applies to all covered consumer products, i.e., those with replaceable and non-replaceable batteries. Stress relief requires heating each sample consumer product that has a battery compartment enclosure made from molded or formed thermoplastic materials in a circulating air oven for at least 7 hours, at an oven temperature of the higher of at least 70 °C (158 °F) or at least 10 °C (18 °F) higher than the maximum temperature of the thermoplastic battery compartment enclosure during the most stringent normal operation of the consumer product. The rule proposes that testers

must allow the product sample to cool to room temperature after removal from the oven before proceeding, to achieve more consistent results across tests and test labs.

*Performance test: Pre-conditioning: Battery replacement.* Mechanical pre-conditioning breaks-in the component parts associated with securing the battery compartment and is needed to address durability issues associated with battery compartments, such as stripping of threads. Accordingly, proposed § 1263.3(e)(1)(ii), which applies only to consumer products with button cell or coin batteries intended to be removable or replaceable, requires opening the battery compartment enclosure, removing and replacing the button cell or coin battery, and closing the battery compartment enclosure for a total of 10 cycles. When battery compartment enclosures are secured with one or more screws, the screws must be loosened and then tightened using a suitable screwdriver, and applying a continuous linear torque, according to the Torque to Be Applied to Screws table, Table 20, of the Standard for Audio, Video and Similar Electronic Apparatus—Safety Requirements, UL 60065. If the screw(s) do not meet the specified torque requirements during this step, the test method requires removing the screws and repeating the accessibility test in proposed § 1263.3(d).

*Performance test: Abuse tests.* After pre-conditioning consumer product samples, the proposed rule requires that all consumer product samples with removable or replaceable batteries must pass a series of six abuse tests, conducted in the sequence set forth in the proposed rule. After testing, each sample must meet the compliance requirement in proposed § 1263.3(e)(3).

*Performance test: Abuse tests: Drop test.* To address foreseeable risks of breaking consumer products or their battery compartments, proposed § 1263.3(e)(2)(i) requires each sample to be dropped 10 times from a height of 1.0 m (39.4 in) onto a horizontal hardwood surface in positions likely to produce the maximum force on the battery compartment enclosure. The hardwood surface must be at least 13 mm (0.5 in) thick, mounted on two layers of nominal 19 mm (0.75 in) thick plywood, and placed on a concrete or equivalent non-resilient surface.

*Performance test: Abuse tests: Impact test.* Consistent with the UL 4200A standard, proposed § 1263.3(e)(2)(ii) requires that the battery compartment enclosure door or cover on each sample consumer product be subjected to three, at least 2-J (1.5-ft-lbf) impacts, as shown

in Figures 1 and 2 to proposed paragraph § 1263.3(e)(2)(ii).

**Performance test: Abuse tests: Crush test.** To address the scenario of a child opening a battery compartment that cannot be impacted directly during the drop test proposed § 1263.3(e)(2)(iii) requires each sample consumer product to be subjected to a crush test using requirements similar to UL 4200A and IEC 62368–1. The crush test simulates a child pushing on the product with hands or feet, which cannot be assessed during the drop test on some consumer products. The proposed rule requires that each sample be supported by a fixed, rigid surface, in positions likely to produce the most adverse results, as long as the position of the consumer product is self-supported, and then apply a crushing force of at least 335 N (75.3 lbf) to the exposed surface for a period of 10 seconds. The test method states the force should be applied using a flat surface measuring approximately 100 mm by 250 mm (3.9 in by 9.8 in).

**Performance test: Abuse tests: Compression test.** Proposed § 1263.3(e)(2)(iv) requires the compression test in ASTM F963 as codified in the toy standard. It further subjects consumer products to a crushing load that addresses children unintentionally opening battery compartments that cannot be impacted directly during the drop test, but can be pushed open with hands or fingers. The test method requires that if any surface of the battery compartment enclosure is accessible to a child and inaccessible to flat surface contact during the drop test, then apply the Compression Test from 16 CFR part 1250 (the mandatory toy standard) to that surface, using a force of at least 136 N (30.6 lbf).

**Performance test: Abuse tests: Torque test.** The proposed rule applies to products not specifically contemplated by UL 4200A or IEC 62368–1, such as shirts and shoes that light up and rely on a button cell or coin battery to provide a power source. Accordingly, the proposed rule includes torque and tension tests to address battery accessibility to children in pliable products. If a child can grasp any part of the battery compartment enclosure on a sample consumer product, including the door or cover, with at least the thumb and forefinger, or using teeth, proposed § 1263.3(e)(2)(v) requires the battery compartment enclosure to be tested to the Torque Test for Removal of Components from 16 CFR part 1250 (the toy standard), using a torque of at least 0.50 Nm (4.4 in.-lbf).

**Performance test: Abuse tests: Tension test.** For the same reasons stated for the proposed torque

requirement, if a child can grasp any part of the battery compartment enclosure on a sample consumer product, including the door or cover, with at least the thumb and forefinger, or using teeth, proposed § 1263.3(e)(2)(vi) requires application of the Tension Test for Removal of Components from 16 CFR part 1250 (the toy standard) to the battery compartment enclosure, using a force of at least 70.0 N (15.7 lbf).

**Performance test: Abuse tests: Compliance.** Proposed § 1263.3(e)(3) provides that if a button cell or coin battery becomes accessible or is liberated from a consumer product as a result of any of the abuse tests in § 1263.3(e)(2), the consumer product is noncompliant and fails testing. Additionally, after completing all abuse testing, the proposed rule requires that the tester apply a force of at least 50 N (11.2 lbf) for 10 seconds to the battery compartment enclosure door or cover using the accessibility probe at the most unfavorable position on the battery compartment enclosure, and in the most unfavorable direction. The force must be applied in only one direction at a time. If the battery compartment enclosure door or cover opens or does not remain functional, or the button cell or coin battery becomes accessible, the consumer product is noncompliant and fails testing.

**Performance test: Secureness test.** Proposed § 1263.3(f) applies only to button cell or coin batteries not intended for removal or replacement that are installed in a consumer product, and that are accessible based on the test in § 1263.3(b). Such products must be tested by applying a test hook, as shown in Figure 3 to paragraph § 1263.3(f) of the regulation text, using a force of at least 22 N (4.9 lbf), directed outwards, applied for 10 seconds at all points where application of a force is possible. To pass the test, the button cell or coin battery cannot become accessible or liberate from the consumer product during testing.

#### D. Section 1263.4 Requirements for Marking and Labeling

As explained in sections V and VI of this preamble, the proposed rule establishes warning label requirements for packaging containing button cell or coin batteries; packaging of consumer products containing such batteries (regardless of whether the batteries are permanent or replaceable); battery compartments of consumer products that contain button cell or coin batteries (where practicable and regardless of whether the batteries are permanent or replaceable); instructions or manuals

that accompany such consumer products; as well as time-of-sale (internet and in-store) notification of performance and technical data that provides information about the safety of button cell or coin batteries. Please see sections V and VI of this preamble for a detailed description and rationale for the proposed warning label requirements.

#### E. Section 1263.5 Severability

Section 1263.5 proposes a severability clause. The proposed provision states the Commission's intent that if certain requirements in the rule are stayed or determined to be invalid by a court, the remaining requirements in the rule should continue in effect. This severability clause would apply to all provisions whether adopted as part of the safety standard under Reese's Law or as a notification requirement under section 27(e) of the CPSA, to reflect the Commission's intent that part 1263 as whole be given its greatest effect.

#### VIII. Testing, Certification, and Notice of Requirements

Section 14(a) of the CPSA includes requirements for certifying that consumer products comply with applicable mandatory standards. 15 U.S.C. 2063(a). Section 14(a)(1) addresses required certifications for non-children's products, and sections 14(a)(2) and (a)(3) address certification requirements specific to children's products.

**Non-Children's Products.** Section 14(a)(1) of the CPSA requires every manufacturer (which includes importers per 15 U.S.C. 2052(a)(11)) of a non-children's product that is subject to a consumer product safety rule under the CPSA or a similar rule, ban, standard, or regulation under any other law enforced by the Commission to certify that the product complies with all applicable CSPSC-enforced requirements. 15 U.S.C. 2063(a)(1). Section 14(g) of the CPSA contains content and availability requirements for certificates. 15 U.S.C. 2063(g).

**Children's Products.** A "children's product" is a consumer product that is "designed or intended primarily for children 12 years of age or younger." 15 U.S.C. 2052(a)(2). Section 4 of Reese's Law specifically exempts from the performance and labeling requirements in section 2 of the law, any toy product that is in compliance with the battery accessibility and labeling requirements in 16 CFR part 1250, the mandatory toy standard. However, all non-toy children's products that contain button cell or coin batteries are subject to the proposed rule and must be tested by a



CPSC-accepted third party laboratory and certified as compliant.

The following factors are relevant when determining whether a product is a children's product:

- manufacturer statements about the intended use of the product, including a label on the product if such statement is reasonable;
- whether the product is represented in its packaging, display, promotion, or advertising as appropriate for use by children 12 years of age or younger;
- whether the product is commonly recognized by consumers as being intended for use by a child 12 years of age or younger; and
- the Age Determination Guidelines issued by CPSC staff in January 2020, and any successor to such guidelines.

*Id.* "For use" by children 12 years and younger generally means that children will interact physically with the product based on reasonably foreseeable use. 16 CFR 1200.2(a)(2). Children's products, for example, may be decorated or embellished with a childish theme, be sized for children, or be marketed to appeal primarily to children. *Id.* § 1200.2(d)(1).

Section 14(a)(2) of the CPSA requires the manufacturer or private labeler of a children's product that is subject to a children's product safety rule to certify that, based on a third party conformity assessment body's testing, the product complies with the applicable children's product safety rule. 15 U.S.C. 2063(a)(2). The Commission's requirements for children's product testing and certification are codified in 16 CFR part 1107. Section 14(a) of the CPSA also requires the Commission to publish a notice of requirements (NOR) for a third party conformity assessment body (*i.e.*, testing laboratory) to obtain accreditation to assess conformity with a children's product safety rule. 15 U.S.C. 2063(a)(3)(A). Because some consumer products that contain button cell or coin batteries are children's products, the proposed rule is a children's product safety rule, as applied to those products. Accordingly, if the Commission issues a final rule, it must also issue an NOR.

The Commission published a final rule, codified at 16 CFR part 1112, entitled *Requirements Pertaining to Third Party Conformity Assessment Bodies*, which established requirements and criteria concerning testing laboratories. 78 FR 15836 (Mar. 12, 2013). Part 1112 includes procedures for CPSC to accept a testing laboratory's accreditation and lists the children's product safety rules for which CPSC has published NORs. When CPSC issues a

new NOR, it must amend part 1112 to include that NOR. Accordingly, as part of this NPR for child-resistant battery compartments on consumer products, the Commission proposes to amend part 1112 to add the "Safety Standard and Notification Requirements for Button Cell or Coin Batteries and Consumer Products Containing Such Batteries" to the list of children's product safety rules for which CPSC has issued an NOR.

Testing laboratories that apply for CPSC acceptance to test consumer products containing button cell or coin batteries, that are children's products, to comply with the new rule, would have to meet the requirements in part 1112. When a laboratory meets the requirements of a CPSC-accepted third party conformity assessment body, the laboratory can apply to CPSC to include 16 CFR part 1263, *Safety Standard and Notification Requirements for Button Cell or Coin Batteries and Consumer Products Containing Such Batteries*, in the laboratory's scope of accreditation of CPSC safety rules listed on the CPSC website at: [www.cpsc.gov/labsearch](http://www.cpsc.gov/labsearch).

#### IX. Effective Date

The APA generally requires that the effective date of a rule be at least 30 days after publication of the final rule. 5 U.S.C. 553(d). The Commission proposes that a final rule containing (1) performance and warning label requirements for consumer products containing button cell or coin batteries, and (2) warning label requirements for button cell or coin battery packaging, will become effective 180 days after publication of a final rule in the **Federal Register**. Therefore, in accordance with section 6 of Reese's Law, products manufactured or imported after 180 days from publication of a final rule would be required to comply with the rule.

The Commission is proposing 180 days to comply with the rule because a substantial number of consumer products containing button cell or coin batteries currently do not meet the performance requirements in UL 4200A or ASTM F963, and many affected industries will be unfamiliar with all or part of the proposed requirements. These industries may need to redesign, test, and certify to the requirements in the rule. Children's products that are not toys will require third party testing to the rule, and 180 days will provide sufficient time for test labs to become ISO-accredited and have this accreditation accepted by CPSC to test children's products. Additionally, the warning label requirements in the proposed rule include specific language that requires manufacturers to revise or

reprint all existing packaging and to revise on-product warnings, where practicable.

A 180-day effective date reflects similar language in Reese's Law, which in section 3(a) sets a 180-day effective date for the child-resistant packaging requirements. The Commission requests comment on whether a later or an earlier effective date would be appropriate to comply with the proposed requirements and asks commenters to provide specific information to support such a later or an earlier effective date.

#### X. Initial Regulatory Flexibility Analysis

The Regulatory Flexibility Act (RFA) requires that agencies review a proposed rule for the rule's potential economic impact on small entities, including small businesses. Section 603 of the RFA generally requires that agencies prepare an initial regulatory flexibility analysis (IRFA) and make the analysis available to the public for comment when the agency publishes an NPR. 5 U.S.C. 603. The IRFA must describe the impact of the proposed rule on small entities and identify significant alternatives that accomplish the statutory objectives and minimize any significant economic impact of the proposed rule on small entities. CPSC staff prepared an IRFA for this rulemaking that appears at Tab E of the Staff's NPR Briefing Package. We provide a summary of the IRFA below.

##### A. Reasons for Agency Action and Legal Basis for NPR

The proposed rule is intended to address ingestion of button cell or coin batteries by children 6 years old and younger, and the associated deaths and injuries, as required by Reese's Law, 15 U.S.C. 2056e, and authorized by section 27(e) of the CPSA, 15 U.S.C. 2076(e). As detailed in Tab D of Staff's NPR Briefing Package, the proposed rule would require performance requirements for button cell or coin battery-powered consumer products, and require marking and labeling of consumer products, consumer product packaging, and button cell or coin battery packaging, as provided in Tab C of Staff's NPR Briefing Package.

##### B. Small Entities to Which the Proposed Rule Would Apply

The North American Industry Classification System (NAICS) defines product codes for U.S. firms. Firms that manufacture button cell or coin battery-powered consumer products may list their business under a large variety of NAICS product codes. Most of these



firms likely fall under the following NAICS codes: 334118 Computer Terminal and Other Computer Peripheral Equipment Manufacturing; 334310 Audio and Video Equipment Manufacturing; 335999 All Other Miscellaneous Electrical Equipment and Component Manufacturing; and 339920 Sporting and Athletic Goods Manufacturing. Importers of button cell or coin battery-powered consumer products are also as varied as the manufacturers. Staff expects most of the firms to fall under the following NAICS codes as wholesalers: 423620 Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers; 423430 Computer and Computer Peripheral

Equipment and Software Merchant Wholesalers; and 423690 Other Electronic Parts and Equipment Merchant Wholesalers.

Retailers of button cell or coin battery-powered consumer products consist of a large variety of retailer types from large, “big box” retailers, to smaller specialized product firms. Nearly every NAICS code listed under retail trade (44, 45) may sell a product within scope of the proposed rule. Staff estimates that most of these products are sold by firms listed in NAICS codes 443140 Electronics and Appliance Retailers; 455219 All Other General Merchandise Retailers; 459420, Gift, Novelty, and Souvenir Retailers; 452000 General

Merchandise Stores; and 459110 Sporting Goods Retailers.

Under U.S. Small Business Administration guidelines, a manufacturer, importer, and retailer of button cell or coin battery-powered consumer products is categorized as “small,” based on the associated NAICS code. Manufacturers are categorized as small by the number of employees and importers/retailers by annual revenues. Based on 2017 data from U.S. Census Bureau, and a sample of retailers’ estimated revenues, staff estimated the number of firms classified as small for each NAICS code listed above (Census Bureau, 2020). The tables below provide the estimates of the number of small firms by each code.

TABLE 13—ESTIMATED NUMBER OF SMALL MANUFACTURERS AND IMPORTERS

NAICS code	Description	SBA size standard for manufacturers/ importers (# of employees)	Number of firms that meet size standard
334118 .....	Computer Terminal and Other Computer Peripheral Equipment Manufacturing.	1,000	509
334290 .....	Other Communications Equipment Manufacturing .....	750	305
334310 .....	Audio and Video Equipment Manufacturing .....	750	453
335210 .....	Small Electrical Appliance Manufacturing .....	1,500	119
335999 .....	All Other Miscellaneous Electrical Equipment and Component Manufacturing.	500	734
339920 .....	Sporting and Athletic Goods Manufacturing .....	750	1,564
339940 .....	Office Supplies (except Paper) Manufacturing .....	750	412
339999 .....	All Other Miscellaneous Manufacturing .....	500	5,714
423420 .....	Office Equipment Merchant Wholesalers .....	200	2,197
423430 .....	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers.	250	5,743
423620 .....	Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers.	225	1,956
423690 .....	Other Electronic Parts and Equipment Merchant Wholesalers .....	250	8,826
423910 .....	Sporting and Recreational Goods and Supplies Merchant Wholesalers.	100	4,521
423990 .....	Other Miscellaneous Durable Goods Merchant Wholesalers .....	100	8,350

TABLE 14—ESTIMATED NUMBER OF SMALL RETAILERS

NAICS code	Description	SBA size standard for retailers (annual revenue) \$millions	Number of firms that meet size standard
444110 .....	Home Centers .....	41.50	1,526
444130 .....	Hardware Retailers .....	14.50	9,623
444240 .....	Nursery, Garden Center, and Farm Supply Retailers .....	19.00	13,228
443140 .....	Electronics and Appliance Retailers .....	35.00	18,906
455110 .....	Department Stores .....	35.00	11
455211 .....	Warehouse Clubs and Supercenters .....	41.50	3
455219 .....	All Other General Merchandise Retailers .....	35.00	7,812
456110 .....	Pharmacies and Drug Retailers .....	33.00	18,912
459110 .....	Sporting Goods Retailers .....	23.50	16,123
459410 .....	Office Supplies and Stationery Retailers .....	35.00	2,646
459420 .....	Gift, Novelty, and Souvenir Retailers .....	12.00	15,264
459999 .....	All Other Miscellaneous Retailers .....	10.00	36,225
452000 .....	General Merchandise Stores .....	35.00	7,832

### *C. Costs and Impact of the Proposed Rule on Small Entities*

Button cell or coin battery-powered consumer products may require redesign to meet the rule's requirement for a battery compartment that requires a coin or tool to secure the enclosure ("tool lock"), or a double-action lock. Button cell or coin battery-powered consumer product manufacturers would most likely adopt a tool lock secured with a screw for affected products that currently do not conform to the proposed rule requirements. The potential costs of this proposed rule, therefore, are the incremental cost to incorporate a screw lock, and the one-time research, development, and retooling costs associated with any changes to battery compartments. For products that incorporate a double-action lock to secure the compartment, the Commission expects the only design-related cost incurred would be the redesign of the compartment to accommodate the change.

Staff's estimate of the incremental costs to modify a battery compartment for a tool lock ranges from \$0.02 to \$0.04 per product. The estimate of possible research, development, and retooling costs is a maximum of \$15,400 per firm. We expect firms that choose to meet the requirement of the proposed rule using a double-action lock would only incur research and development costs.

Manufacturers would likely incur additional costs to certify that their button cell or coin battery-powered consumer products meet the proposed rule, as required by section 14 of the CPSA, 15 U.S.C. 2063. For general use products, the certification must be based on a test of each product or a reasonable testing program. Manufacturers may complete the testing themselves or use a testing laboratory. Certification of children's products, however, must be completed by a CPSC-accepted, third party conformity assessment body (*i.e.*, third party laboratory). The cost of laboratory certification testing is expected to range from \$150 to \$350 per product sample. These third party testing costs should be considered as a possible maximum testing cost of the proposed rule, because less costly alternatives may be available.<sup>14</sup>

To comply with the proposed rule, small manufacturers would incur a one-

time redesign cost and continuous incremental component costs, described above, for some product lines that currently do not meet the requirements. We do not expect most small manufacturers to suffer a disproportionate cost effect from the proposed rule. Firms that rely heavily on the production of small, unique or novel electronic products, or high-volume, low-price products, could be affected adversely, however. Retail prices for button cell or coin battery-powered consumer products vary widely, with the least expensive product, on a per-unit basis, being mini flashlights at \$1.00.<sup>15</sup> A small manufacturer could incur costs that exceed 1 percent of annual revenue if the firm only produced these high-volume, low-price, or novel electronic products. Also, smaller manufacturers with less than \$770,000 to \$1,540,000 in annual revenue could incur one-time costs that exceed 1 percent of annual revenue, based on CPSC staff's estimate of the potential research and development costs, which range from \$7,700 to \$15,400 per firm.

Generally, CPSC staff considers an impact to be potentially significant if it exceeds 1 percent of a firm's revenue. CPSC staff anticipates a potentially significant impact on some small firms that manufacture button cell or coin battery-powered consumer products. Staff assesses, however, that most small firms would not incur costs that exceed 1 percent of annual revenues, and therefore, would not be significantly impacted by the proposed rule.

### *D. Alternatives*

Under section 603(c) of the Regulatory Flexibility Act, an IRFA analysis should "contain a description of any significant alternatives to the proposed rule which accomplish the stated objectives of the applicable statutes and which minimize any significant impact of the proposed rule on small entities." 5 U.S.C. 603(c). CPSC staff assessed that the broad scope of Reese's Law does not allow for a significant alternative that would reduce impacts to small businesses, such as limiting scope, providing exemptions, and educating consumers in lieu of regulatory action. To reduce the impact of the proposed rule on small firms, CPSC proposes not to require labeling of zinc-air batteries, which do not pose the same type of ingestion hazard as other button cell or coin batteries. This proposal will decrease burden, but not consequentially, because incremental labeling costs are not significant. CPSC

also could refrain from proposing the additional labeling requirements under section 27(e) of the CPSA, which are not required by Reese's Law. However, removing section 27(e) performance and technical data requirements would reduce burden by an inconsequential amount, because firms would still have to conform to the other labeling provisions mandated by Reese's Law. The incremental increase in burden from staff's additional labeling requirements is insignificant.

### **XI. Environmental Considerations**

The Commission's regulations address whether the agency is required to prepare an environmental assessment or an environmental impact statement. Under these regulations, certain categories of CPSC actions normally have "little or no potential for affecting the human environment," and therefore, do not require an environmental assessment or an environmental impact statement. 16 CFR 1021.5(c)(1). Safety standards providing performance and labeling requirements for consumer products that contain button cell or coin batteries fall within this categorical exclusion.

### **XII. Paperwork Reduction Act**

This proposed rule contains information collection requirements that are subject to public comment and review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (PRA; 44 U.S.C. 3501–3521). Under the PRA, an agency must publish the following information:

- A title for the collection of information;
- A summary of the collection of information;
- A brief description of the need for the information and the proposed use of the information;
- A description of the likely respondents and proposed frequency of response to the collection of information;
- An estimate of the burden that will result from the collection of information; and
- Notice that comments may be submitted to OMB.

44 U.S.C. 3507(a)(1)(D). In accordance with this requirement, the Commission provides the following information:

*Title:* Amendment to Third Party Testing of Children's Products, approved previously under OMB Control No. 3041–0159.

*Summary, Need, and Use of Information:* Based on the requirements in Reese's Law, 15 U.S.C. 2056e(a) and (b), and section 27(e) of the Consumer Product Safety Act, 15 U.S.C. 2076(e),

<sup>14</sup> Certificate content requirements are set forth in section 14(g) of the CPSA and codified in 16 CFR part 1110. A reasonable testing program performed by the manufacturer would meet the requirements for general use (non-children's) products, but children's products are required to be tested and certified based on the third party testing requirements in 16 CFR part 1107.

<sup>15</sup> Based on staff's review of product offerings on retailer websites and in-store locations.

the proposed consumer product safety standard prescribes performance requirements for child-resistant battery compartments on consumer products that contain button cell or coin batteries, and warning requirements for button cell and coin-battery packaging, consumer product packaging, consumer products, and instructions and manuals. These performance and labeling requirements are intended to reduce or eliminate injuries and deaths associated with children 6 years old and younger ingesting button cell or coin batteries.

Section 4 of Reese’s Law specifically exempts from the performance and labeling requirements in section 2 of the law, any toy product<sup>16</sup> that is in compliance with the battery accessibility and labeling requirements in 16 CFR part 1250, Safety Standard Mandating ASTM F963 for Toys. However, some consumer products that are not toys subject to the toy standard are considered children’s products. A “children’s product” is a consumer product that is “designed or intended primarily for children 12 years of age or younger.” 15 U.S.C. 2052(a)(2). The Commission’s regulation at 16 CFR part 1200 further interprets the term. Section 14 of the CPSA requires that children’s products be tested by a third party conformity assessment body, and that the manufacturer of the product, including an importer, must issue a

children’s product certificate (CPC). Based on such third party testing, a manufacturer or importer must attest to compliance with the applicable consumer product safety rule by issuing the CPC. The requirement to test and certify children’s products falls within the definition of “collection of information,” as defined in 44 U.S.C. 3502(3).  
The requirements for the CPCs are stated in section 14 of the CPSA, and in the Commission’s regulation at 16 CFR parts 1107 and 1110. Among other requirements, each certificate must identify the manufacturer or private labeler issuing the certificate and any third party conformity assessment body, on whose testing the certificate depends, the date and place of manufacture, the date and place where the product was tested, each party’s name, full mailing address, telephone number, and contact information for the individual responsible for maintaining records of test results. The certificates must be in English. The certificates must be furnished to each distributor or retailer of the product and to the CPSC, if requested.  
The Commission has an OMB control number, 3041–0159, for children’s product testing and certification. This proposed rule would amend this collection of information to add testing and certification to the performance requirements for child-resistant battery

compartments on children’s products (that are not toys) that contain button cell or coin batteries, as well as warnings on the packaging of these children’s products, the battery compartment of these children’s products, and any accompanying instructions and manuals, as set forth in the proposed rule.  
*Respondents and Frequency:* Respondents include manufacturers and importers of non-toy children’s products that contain button cell or coin batteries. Manufacturers and importers must comply with the information collection requirements when children’s products that contain button cell or coin batteries are manufactured or imported after the effective date of the rule.  
*Estimated Burden:* CPSC has estimated the respondent burden in hours, and the estimated labor costs to the respondent.  
*Estimate of Respondent Burden:* The hourly reporting burden imposed on firms that manufacture or import non-toy children’s products that contain button cell or coin batteries include the time and cost to maintain records related to third party testing, the time to issue a CPC, and the time to include required warning labels on children’s product battery compartments, children’s product packaging, and to update instructions or manuals with required warnings.

TABLE 15—ESTIMATED ANNUAL REPORTING BURDEN

Burden type	Total annual reponses	Length of response (hours)	Annual burden (hours)
Third-party testing, recordkeeping and record maintenance .....	6,046	5.0	30,230
Certification and labeling .....	1,209	1.0	1,209
Total Burden .....	.....	.....	31,439

Three types of third party testing of children’s products are required: certification testing, material change testing, and periodic testing. Requirements state that manufacturers must conduct sufficient testing to ensure that they have a high degree of assurance that their children’s products comply with all applicable children’s product safety rules before such products are introduced into commerce. If a manufacturer conducts periodic testing, they are required to keep records that describe how the samples of periodic testing are selected.  
CPSC estimates that 0.4 percent of all children’s products sold annually, or

6,046 children’s products, are children’s products that contain button cell or coin batteries and would be subject to third-party testing, for each of which 5.0 hours of recordkeeping and record maintenance will be required. Thus, the total hourly burden of the recordkeeping associated with certification is 30,230 hours (5.0 × 6,046).  
Additionally, battery compartments, product packaging, and instructions and manuals must be updated to include the required warnings statements. We estimate that the time required to make these modifications is about 1 hour per product. Based on an evaluation of a sample of supplier product lines, there

are a total of 1,209 affected products; therefore, the estimated burden associated with warnings and labeling is 1 hour per product × number of product lines = 1,209 hours. We estimate the hourly compensation for the time required to create and update labels is \$36.80 (U.S. Bureau of Labor Statistics, “Employer Costs for Employee Compensation,” Sept. 2022, total compensation for all sales and office workers in goods-producing private industries: <https://www.bls.gov/news.release/archives/eccec12152022.pdf>). Therefore, the estimated annual cost to industry associated with the labeling requirements is \$1,156,955

<sup>16</sup> For purposes of Reese’s Law, a “toy product” is “any object designed, manufactured, or marketed

as a plaything for children under 14 years of age.” 15 U.S.C. 2056e Notes.

(\$36.80 per hour × 31,439 hours = \$1,156,955.2). No operating, maintenance, or capital costs are associated with the collection.

This burden estimate is the largest reasonably possible, assuming that every manufacturer had to modify three product labels (battery compartment, packaging, and instructions/manual). However, based on staff's review of non-toy children's products that contain button cell or coin batteries, many of these products already contain some type of warning on the product or product packaging. Accordingly, staff believes it possible that product modification for warnings and any associated burden could be very low.

Under the OMB's regulations (5 CFR 1320.3(b)(2)), the time, effort, and financial resources necessary to comply with a collection of information that would be incurred by persons in the "normal course of their activities" are excluded from a burden estimate, where an agency demonstrates that the disclosure activities required to comply are "usual and customary." If warning statements on one or more battery compartments, product packaging, and instructions/manuals is usual and customary for non-toy children's products that contain button cell or coin batteries, CPSC could estimate that no burden hours are associated with the labeling requirements in the proposed rule, because any burden associated with warning labels would be "usual and customary" and not within the definition of "burden" under the OMB's regulations. We request comments on this potential estimate of no burden for warning labels, or any aspect of labeling. We also request comment on the preliminary analysis demonstrating that the largest possible burden estimate for the proposed standard to require warning labels is 1,209 hours at a cost of \$44,491 annually.

The total estimated burden associated with the proposed rule on non-toy children's products that contain a button cell or coin battery for third party testing, recordkeeping, issuing a certificate (CPC), and placing the required warning statements on the battery compartment of the children's product, on the packaging of the children's product, and on any associated instructions or manuals is 31,439 labor hours annually.

**Labor Cost of Respondent Burden.** According to the U.S. Bureau of Labor Statistics (BLS), Employer Costs for Employee Compensation, the total compensation cost per hour worked for all private industry workers was \$39.61 (September 2022, <https://www.bls.gov/ncs/ect/>). Based on this analysis, CPSC

staff estimates that labor cost of respondent burden would impose a cost to industry of approximately \$1,245,299 annually (31,439 hours × \$39.61 per hour = \$1,245,298.79).

**Cost to the Federal Government.** The estimated annual cost of the information collection requirements to the Federal Government is approximately \$4,448, which includes 60 staff hours to examine and evaluate the information, as needed, for Compliance activities. This is based on a GS-12, step 5 level salaried employee. The average hourly wage rate for a mid-level salaried GS-12 employee in the Washington, DC metropolitan area (effective as of January 2023 is \$51.15 (GS-12, step 5). This represents 69.0 percent of total compensation (U.S. Bureau of Labor Statistics, "Employer Costs for Employee Compensation," September 2022, Table 2., percentage of wages and salaries for all civilian management, professional, and related employees: [https://www.bls.gov/news.release/archives/ecec\\_12152022.pdf](https://www.bls.gov/news.release/archives/ecec_12152022.pdf)). Adding an additional 31.0 percent for benefits brings average annual compensation for a mid-level salaried GS-12 employee to \$74.13 per hour. Assuming that approximately 60 hours will be required annually, this results in an annual cost of \$4,448 (\$74.13 per hour × 60 hours = \$4,447.8).

**Comments.** CPSC has submitted the information collection requirements of this proposed rule to OMB for review in accordance with PRA requirements. 44 U.S.C. 3507(d). CPSC requests that interested parties submit comments regarding information collection to the Office of Information and Regulatory Affairs, OMB (see the **ADDRESSES** section at the beginning of this NPR).

Pursuant to 44 U.S.C. 3506(c)(2)(A), the Commission invites comments on:

- Whether the proposed collection of information is necessary for the proper performance of CPSC's functions, including whether the information will have practical utility;
  - The accuracy of CPSC's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
    - Ways to enhance the quality, utility, and clarity of the information the Commission proposes to collect;
      - Ways to reduce the burden of the collection of information on respondents, including the use of automated collection techniques, when appropriate, and other forms of information technology;
    - The estimated burden hours associated with labels and hang tags, including any alternative Estimates; and

- The estimated respondent cost other than burden hour cost.

### XIII. Preemption

Section 26(a) of the CPSA, 15 U.S.C. 2075(a), provides that when a consumer product safety standard is in effect and applies to a product, no state or political subdivision of a state may either establish or continue in effect a standard or regulation that prescribes requirements for the performance, composition, contents, design, finish, construction, packaging, or labeling of such product dealing with the same risk of injury unless the state requirement is identical to the Federal standard. Section 26(c) of the CPSA also provides that states or political subdivisions of states may apply to the Commission for an exemption from this preemption under certain circumstances.

Section 2(a) of Reese's Law requires the Commission to issue a "consumer product safety standard for button cell or coin batteries and consumer products containing button cell or coin batteries," and section 2(c) of Reese's Law states that a consumer product safety standard promulgated under subsection (a) shall be treated as a consumer product safety rule promulgated under section 9 of the CPSA (15 U.S.C. 2058). Therefore, the preemption provision of section 26(a) of the CPSA would apply to a final rule issued under section 2 of Reese's Law. 15 U.S.C. 2056e. A notification requirement under section 27(e) of the CPSA is not a consumer product safety rule and would not be subject to the preemption provision in section 26(c) of the CPSA.

### XIV. Request for Comments

The Commission requests comment on all aspects of the proposed rule, including specifically the following items:

#### A. Performance Requirements

- Whether any consumer products (as opposed to medical devices, such as hearing aids) contain zinc-air button cell or coin batteries, and whether such products should be required to meet the performance requirements for battery compartments on consumer products;
  - Whether any voluntary standard meets the performance and labeling requirements of Reese's Law;
  - Whether the requirements for accessibility of battery compartments should incorporate test methods commonly used on toy products, such as the torque and tensile tests for parts of the product that can be gripped by a child's fingers or teeth, or a tensile test for pliable materials;

- For consumer products that use button cell or coin batteries and have large panel doors, what consumer products have such doors, and should the Commission exclude large panel doors from the requirement for captive screws; why or why not (*i.e.*, why does a large panel door represent a different risk of injury from battery access without using captive screws than a smaller battery compartment door does?);

- Whether a double-action locking mechanism used to secure battery compartment enclosures, meaning those mechanism that rely on two independent and simultaneous hand movements to open (versus a screw, for example), should be allowed to secure button cell or coin battery compartments;

- Whether the proposed secureness test based on UL 4200A is sufficient to address reasonably foreseeable use and abuse of consumer products containing non-removable batteries;

- Whether Test Probe 11 of the Standard for Protection of Persons and Equipment by Enclosures—Probes for Verification, IEC 61032, is adequate to verify accessibility of a button cell or coin battery in a battery compartment;

- Whether there are any additional performance requirements that should be considered, either for specific types of products, or in general;

- Whether one or more performance requirements should be based on IEC 62368–1, in addition to, or instead of, performance requirements based on UL 4200A; and

- Whether the proposed performance requirements are needed and are likely to eliminate or adequately reduce the ingestion hazard associated with access to button cell or coin batteries from consumer products.

#### B. Marking and Labeling Requirements

- Whether the Commission should require ingestion warnings on zinc-air button cell or coin battery packaging;

- Whether all button cell or coin battery packaging should include the warning on the principal display panel;

- Whether the requirement for the “Keep Out of Reach” icon to be 20 mm in diameter for visibility purposes, when alone on the front of battery packaging, provides a sufficient warning of the ingestion hazard;

- Whether the requirement to provide other information related to the safety of button cell or coin batteries is sufficient to address the risk of ingestion and other hazards associated with button cell or coin batteries;

- For technical and performance data related to the safety of button cell or

coin batteries required at the time of purchase, whether the proposed warnings’ content and location requirements are adequate to advise consumers who purchase a product online or in-store about the hazards associated with these batteries;

- Whether staff’s assessment in V.F of this preamble that virtually all consumer products can accommodate either the full warning or one of the scaled icons is accurate;

- Whether the rule should require button cell or coin batteries to be durably and indelibly marked with the “Keep Out of Reach” icon where size permits, at a minimum size of 6 mm in diameter, and if so, whether the appropriate legal authority is Reese’s Law, section 27(e) of the CPSA, or another statute; and

- Whether the internationally recognized safety alert symbol, as shown in yellow color, indicating the presence of a button cell or coin battery, should be required on all consumer products containing such batteries.

#### C. Other Comments

- Whether a later or an earlier effective date would be appropriate to comply with the proposed requirements and to provide specific information to support such a later or an earlier effective date.

- In the IRFA, the number of small firms impacted and expected cost impact on small firms (as a percentage of annual revenue) of the proposed rule.

Submit all comments in accordance with the instructions in the **ADDRESSES** section at the beginning of this document.

#### List of Subjects

##### 16 CFR Part 1112

Administrative practice and procedure, Audit, Consumer protection, Reporting and recordkeeping requirements, Third party conformity assessment body.

##### 16 CFR Part 1263

Batteries, Consumer protection, Imports, Infants and children, Labeling, Law enforcement.

For the reasons discussed in the preamble, the Commission proposes to amend Title 16 of the Code of Federal Regulations as follows:

#### PART 1112—REQUIREMENTS PERTAINING TO THIRD PARTY CONFORMITY ASSESSMENT BODIES

■ 1. The authority citation for part 1112 is revised to read as follows:

**Authority:** 15 U.S.C. 2063; 15 U.S.C. 2051 Notes.

■ 2. Amend § 1112.15 by adding paragraph (b)(55) to read as follows:

**§ 1112.15 When can a third party conformity assessment body apply for CPSC acceptance for a particular CPSC rule or test method?**

\* \* \* \* \*

(b) \* \* \*

(55) 16 CFR part 1263, Safety Standard and Notification Requirements for Button Cell or Coin Batteries and Consumer Products Containing Such Batteries.

\* \* \* \* \*

■ 3. Add part 1263 to read as follows:

#### PART 1263—SAFETY STANDARD AND NOTIFICATION REQUIREMENTS FOR BUTTON CELL OR COIN BATTERIES AND CONSUMER PRODUCTS CONTAINING SUCH BATTERIES

##### Sec.

1263.1 Scope, purpose, effective date, units, exemption.

1263.2 Definitions.

1263.3 Requirements for consumer products containing button cell or coin batteries.

1263.4 Requirements for marking and labeling.

1263.5 Severability.

**Authority:** 15 U.S.C. 2052, 2056e, 2058, 2076(e).

##### § 1263.1 Scope, purpose, effective date, units, and exemption.

(a) *Scope and purpose.* As required by Reese’s Law (15 U.S.C. 2056e, Pub. L. 117–171), this part establishes performance requirements for child-resistant button cell or coin battery compartments on all consumer products that contain, or are designed to contain, such batteries to prevent child access to batteries during reasonably foreseeable use and misuse of the consumer product. The rule is intended to eliminate or adequately reduce the risk of injury and death to children 6 years old and younger from ingesting these batteries. This part also establishes warning label requirements for packaging containing button cell or coin batteries, packaging of consumer products containing such batteries, consumer products, instructions and manuals accompanying consumer products, as well as point-of-sale performance and technical data pursuant to section 27(e) of the Consumer Product Safety Act (15 U.S.C. 2076(e)).

(b) *Effective date.* Except as provided in paragraph (d) of this section, all consumer products containing button cell or coin batteries and all packaging containing button cell or coin batteries subject to the rule that are manufactured or imported after [180 DAYS AFTER

PUBLICATION IN THE **FEDERAL REGISTER**] must comply with the requirements of this part.

(c) *Units*. In this part, values stated without parentheses are the requirement. Values in parentheses are approximate information.

(d) *Exemption for toy products*. Any object designed, manufactured, or marketed as a plaything for children under 14 years of age that is in compliance with the battery accessibility and labeling requirements of 16 CFR part 1250, Safety Standard Mandating ASTM F963 for Toys, is exempt from the requirements of this part.

(e) *Batteries that do not present an ingestion risk*. Button cell or coin batteries that the Commission has determined do not present an ingestion risk are not subject to this rule. These are: zinc-air button cell or coin batteries.

#### **§ 1263.2 Definitions.**

In addition to the definitions given in section 3 of the Consumer Product Safety Act (15 U.S.C. 2052) and section 5 of Reese's Law (15 U.S.C. 2056e Notes), the following definitions apply for purposes of this part:

*Accessibility probe* means Test Probe 11 in IEC 61032 Protection of Persons and Equipment by Enclosures—Probes for Verification.

*Accessible* means able to be contacted by the accessibility probe.

*Button cell or coin battery* means:

(1) A single cell battery with a diameter greater than the height of the battery; or

(2) Any other battery, regardless of the technology used to produce an electrical charge, that is determined by the Commission to pose an ingestion hazard.

*Consumer product containing button cell or coin batteries* means a consumer product containing or designed to use one or more button cell or coin batteries, regardless of whether such batteries are intended to be replaced by the consumer or are included with the product or sold separately.

*Ingestion hazard* means a hazard caused by a person swallowing or inserting a button cell or coin battery into their body whereby:

(1) The button cell or coin battery can become lodged in the digestive tract or airways; and

(2) Can potentially cause death or serious injury through choking, generation of hazardous chemicals, leaking of hazardous chemicals, electrical burns, pressure necrosis, or other means.

*Principal display panel* means the display panel, for a retail package of one

or more button cell or coin batteries or retail package of a consumer product containing button cell or coin batteries, that is most likely to be displayed, shown, presented, or examined under normal or customary conditions of display for retail sale. The principal display panel is typically the front of the package.

*Product display panel* means the surface area on, near, or in the battery compartment of a consumer product containing button cell or coin batteries. For consumer products containing button cell or coin batteries where such batteries are replaceable, the product display panel must be visible while a consumer installs or replaces any button cell or coin battery. For consumer products with one or more nonreplaceable button cell or coin batteries, the product display panel must be visible upon access to the battery compartment.

*Secondary display panel* means a display panel for a retail package of one or more button cell or coin batteries or retail package of a consumer product containing button cell or coin batteries that is opposite or next to the principal display panel. The secondary display panel is typically the rear or side panels of the package.

#### **§ 1263.3 Requirements for consumer products containing button cell or coin batteries.**

(a) *General*. Consumer products containing button cell or coin batteries must meet the performance and labeling requirements in this part to minimize the risk of children accessing and ingesting button cell or coin batteries. Consumer products with battery compartments that allow consumers to remove or replace a button cell or coin battery must comply with the performance requirements in paragraph (b) of this section. Consumer products with battery compartments that do not allow for the removal or replacement of any button cell or coin batteries must comply with the performance requirements in paragraph (c) of this section.

(b) *Performance requirements for consumer products containing button cell or coin batteries that are removable*.

(1) A removable or replaceable button cell or coin battery in a consumer product must not be made accessible when tested pursuant to paragraph (d) of this section.

(2) Battery compartments for removable or replaceable button cell or coin batteries must meet the requirements in paragraph (e) of this section and be secured using at least one of the following methods:

(i) Secure the battery compartment enclosure so that it requires a tool, such as a screwdriver or coin, to open the battery compartment. Opening a battery compartment secured by one or more screws, or a twist-on access cover, must require a minimum torque of 0.5 Nm (4.4 in-lb) and a minimum angle of 90 degrees of rotation, or the fastener(s) must engage a minimum of two full threads. Screws or fasteners used to secure the battery compartment enclosure must be captive to the compartment door, cover, or closure.

(ii) Secure the battery compartment enclosure so that it requires a minimum of two independent and simultaneous hand movements to open. The movements to open cannot be combinable to a single movement with a single finger or digit.

(c) *Performance requirements for consumer products containing button cell or coin batteries that are non-removable*. Consumer products containing button cell or coin batteries not intended for removal or replacement must be made inaccessible by:

(1) Using a battery compartment enclosure that complies with the performance requirements of paragraph (b) of this section; or

(2) Securing the button cell or coin battery using soldering, fasteners such as rivets, or equivalent means, that passes the Secureness Test in paragraph (f) of this section.

(d) *Accessibility test method*. This test assesses whether a child can access a button cell or coin battery installed in a consumer product by determining whether the accessibility probe can contact a button cell or coin battery. The test method is as follows:

(1) To determine whether a button cell or coin battery is accessible, first open and remove any part of the battery compartment enclosure that can be opened or removed without a tool or that can be opened or removed with anything less than two independent and simultaneous movements (for example, a zipper or hook and loop).

(2) If a part of the battery compartment enclosure is protected by pliable material such as fabric, paper, foam, or vinyl, or a pliable material with a seam, apply the Tension Test for Seams in Stuffed Toys and Beanbag-Type Toys test in 16 CFR part 1250 to determine whether the battery compartment enclosure can become exposed or accessible, using a force of at least 70.0 N (15.7 lbf). If a new part of the battery compartment enclosure becomes exposed or accessible, repeat the test in paragraph (d)(1) of this section and the test in this paragraph (d)(2) until no new part of the battery

compartment enclosure becomes exposed or accessible, and then conduct the test in paragraph (d)(3) of this section.

(3) Insert or apply the accessibility probe to any depth that a battery compartment opening will permit, and rotate or angle the accessibility probe before, during, and after insertion or application through the battery compartment opening to any position that is necessary to determine whether the probe can contact the button cell or coin battery. This test is not intended to judge the strength of the material comprising the battery compartment. Use the minimum force necessary in determining whether the probe can contact a button cell or coin battery.

(e) *Performance tests for consumer products containing button cell or coin batteries.* After pre-conditioning in accordance with paragraph (e)(1) of this section, consumer products containing a button cell or coin battery must pass the performance requirements in paragraph (e)(2) or (f) of this section in the order presented, as applicable.

(1) *Pre-conditioning.* Subject each test sample consumer product to applicable pre-conditioning:

(i) *Stress relief.* Subject each sample consumer product with a battery compartment enclosure, door/cover, or door/cover opening mechanism that is made from molded or formed thermoplastic materials to a stress relief test. Place each test sample consumer product in a circulating air oven for at least 7 hours, using an oven temperature of the higher of at least 70°C (158 °F) or at least 10°C (18 °F) higher than the

maximum temperature of thermoplastic battery compartment enclosures, doors/ covers, or door/cover opening mechanisms during the most stringent normal operation of the consumer product. Allow the sample consumer product to cool to room temperature after removal from the oven.

(ii) *Battery replacement.* This step applies only to consumer products with button cell or coin batteries intended to be removable or replaceable. Open the battery compartment enclosure, remove and replace the button cell or coin battery, and close the battery compartment enclosure for a total of 10 cycles. For battery compartment enclosures that are secured with a screw(s), the screw(s) must be loosened and then tightened each time using a suitable screwdriver, applying a continuous linear torque according to the Torque to be Applied to Screws table, Table 20, of the Standard for Audio, Video and Similar Electronic Apparatus—Safety Requirements, UL 60065. If the screw(s) do not meet the specified torque requirements during this step, remove the screw(s) and repeat the test in paragraph (d) of this section.

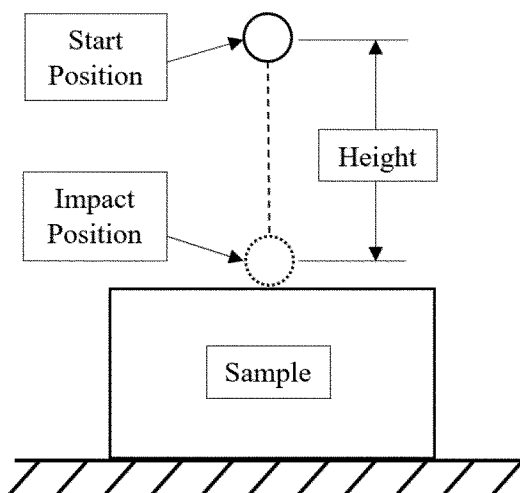
(2) *Abuse tests.* Subject each test sample consumer product to the following abuse tests, performed sequentially, as applicable. Check compliance of the sample using paragraph (e)(3) of this section. If the consumer product contains button cell or coin batteries that are not intended for removal or replacement, and that are accessible based on paragraph (c) of this

section, then the consumer product must be tested under paragraph (f) of this section and this paragraph (e)(2) does not apply.

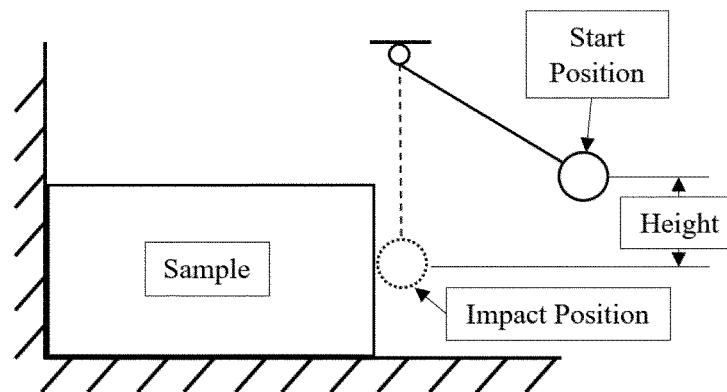
(i) *Drop test.* Drop each sample consumer product ten times from a height of 1.0 m (39.4 in) onto a horizontal hardwood surface in positions likely to produce the maximum force on the battery compartment enclosure. The hardwood surface must be at least 13 mm (0.5 in) thick, mounted on two layers of nominal 19 mm (0.75 in) thick plywood, and placed on a concrete or equivalent non-resilient surface.

(ii) *Impact test.* Subject the battery compartment enclosure door or cover on each sample consumer product to three, at least 2-J (1.5-ft·lbf) impacts. Produce the impact by dropping a steel sphere, 50.8 mm (2 in) in diameter, and weighing approximately 0.5 kg (1.1 lb) from the height required to produce the specified impact, as shown in figure 1 to this paragraph (e)(2)(ii), or suspend the steel sphere by a cord and swing as a pendulum, dropping through the vertical distance required to cause the steel sphere to strike the battery compartment enclosure door or cover with the specified impact, as shown in figure 2 to this paragraph (e)(2)(ii). The steel sphere must strike the battery compartment enclosure door or cover perpendicular to the surface of the battery compartment enclosure.

**Figure 1 to Paragraph (e)(2)(ii). Example Impact Test With a Dropped Steel Sphere.**



**Figure 2 to Paragraph (e)(2)(ii). Impact Test With a Swinging Steel Sphere.**



(iii) *Crush test.* Support each sample consumer product by a fixed rigid supporting surface, in positions likely to produce the most adverse results as long as the position of the consumer product is self-supported. Apply a crushing force of at least 335 N (75.3 lbf) to the exposed surface for a period of 10 seconds. Apply the force using a flat surface measuring approximately 100 by 250 mm (3.9 by 9.8 in).

(iv) *Compression test.* If any surface of the battery compartment enclosure is accessible to a child and inaccessible to a flat surface contact during the drop test, apply the Compression Test from 16 CFR part 1250 to that surface, using a force of at least 136 N (30.6 lbf).

(v) *Torque test.* If a child can grasp any part of the battery compartment enclosure on a sample consumer product, including the door or cover, with at least the thumb and forefinger, or using teeth, apply the Torque Test for Removal of Components from 16 CFR

part 1250 to the battery compartment enclosure, using a torque of at least 0.50 Nm (4.4 in.-lbf).

(vi) *Tension test.* If a child can grasp any part of the battery compartment enclosure on a sample consumer product, including the door or cover, with at least the thumb and forefinger, or using teeth, apply the Tension Test for Removal of Components from 16 CFR part 1250 to the battery compartment enclosure, using a force of at least 72.0 N (16.2 lbf).

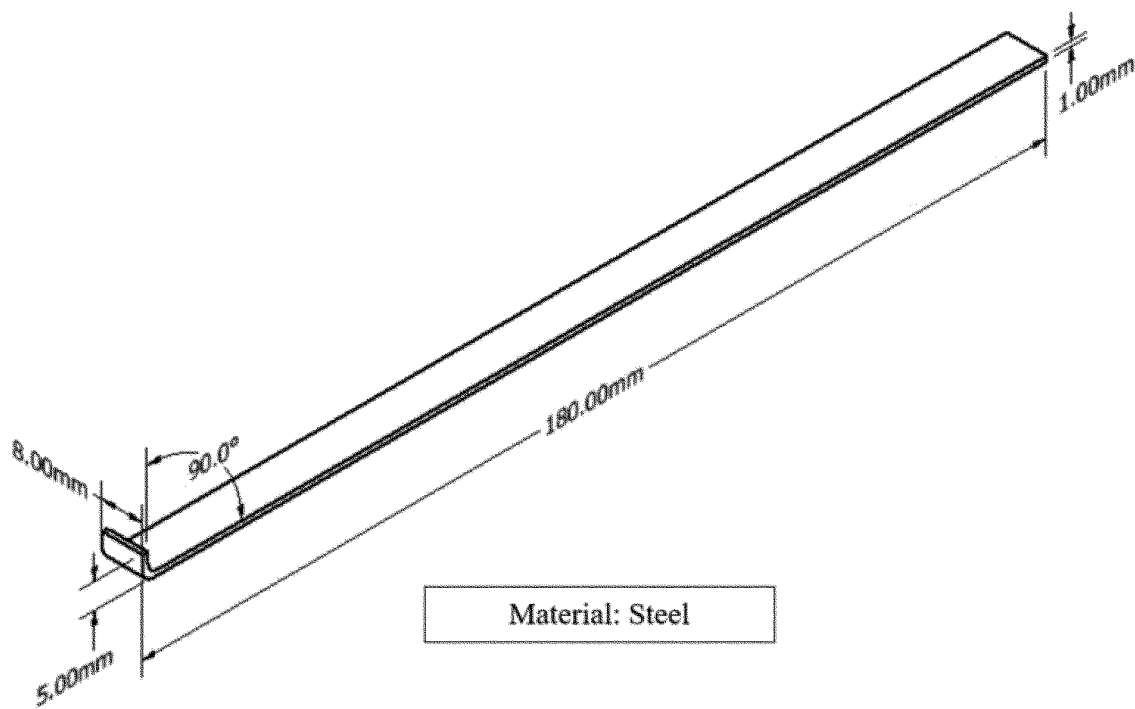
(3) *Compliance.* If a button cell or coin battery becomes accessible or liberates from a consumer product as a result of any of the abuse tests in paragraph (e)(2) of this section, the consumer product is non-compliant and fails testing. Additionally, after completing all abuse testing, apply a force of at least 50 N (11.2 lbf) for 10 seconds to the battery compartment enclosure door or cover using the accessibility probe. Apply the

accessibility probe at the most unfavorable position on the battery compartment enclosure, and in the most unfavorable direction. Apply a force in only one direction at a time. If the battery compartment enclosure door or cover opens or does not remain functional, or the button cell or coin battery becomes accessible, the consumer product is non-compliant and fails testing.

(f) *Secureness test.* Button cell or coin batteries installed in a consumer product that are not intended for removal or replacement, and that are accessible based on paragraph (d) of this section, must be tested by applying a steel test hook, as shown in figure 3 to this paragraph (f), using a force of at least 22 N (4.9 lbf), directed outwards, applied for 10 seconds at all points where application of a force is possible. To pass the test, the button cell or coin battery cannot liberate from the consumer product during testing.



Figure 3 to Paragraph (f). Secureness  
Test Hook for Consumer Products With  
Accessible Button Cell or Coin Batteries  
not Intended for Removal or  
Replacement.



**§ 1263.4 Requirements for marking and labeling.**

(a) *General Requirements.* (1) All warning statements or icons must be clearly visible, prominent, legible, and permanently marked.

(2) Warning statements or icons must be in contrasting color to the background onto which the warning statement or icon is printed.

(3) Warning statements must be in English.

(4) The safety alert symbol, an exclamation mark in a triangle, when used with the signal word, must precede the signal word. The base of the safety

alert symbol must be on the same horizontal line as the base of the letters of the signal word. The height of the safety alert symbol must equal or exceed the signal word letter height.

(5) The signal word “WARNING” must be in black letters on an orange background. The signal word must appear in sans serif letters in upper case only.

(6) Certain text in the message panel must be in bold and in capital letters as shown in the example warning labels to get the attention of the reader.

(7) For labels that are provided on a sticker, hang tag, instructions or

manual, the safety alert symbol and the signal word “WARNING” must be at least 0.2 in. (5 mm) high. The remainder of the text must be in characters whose upper case must be at least 0.1 in. (2.5 mm), except where otherwise specified.

(8) For labels that are required to be on the packaging of button cell and coin batteries, the packaging of consumer products containing such batteries, and directly on consumer products, text size must be dependent on the area of the principal display panel. Text size must be determined based on table 1 to this paragraph (a)(8).

TABLE 1 TO PARAGRAPH (a)(8)—LETTER SIZE FOR RECOMMENDED WARNING LABELS  
[Information based on 16 CFR 1500.19(d)(7)]

Letter Size Measurements in Inches								
Display Area: Inches <sup>2</sup>	0–2	+2–5	+5–10	+10–15	+15–30	+30–100	+100–400	+400
Signal word (WARNING)	3/64	1/16	3/32	7/64	1/8	5/32	1/4	1/2
Statement of Hazard .....	3/64	3/64	1/16	3/32	3/32	7/64	5/32	1/4
Other Text .....	1/32	3/64	1/16	1/16	5/64	3/32	7/64	5/32

Letter Size Measurements in cm (For Reference Only)								
Display Area: cm <sup>2</sup> .....	0–13	+13–32	+32–65	+65–97	+97–194	+194–645	+645–2,581	+2,581
Signal word (WARNING)	0.119	0.159	0.238	0.278	0.318	0.397	0.635	1.270
Statement of Hazard .....	0.119	0.119	0.159	0.238	0.238	0.278	0.397	0.635

TABLE 1 TO PARAGRAPH (a)(8)—LETTER SIZE FOR RECOMMENDED WARNING LABELS—Continued  
[Information based on 16 CFR 1500.19(d)(7)]

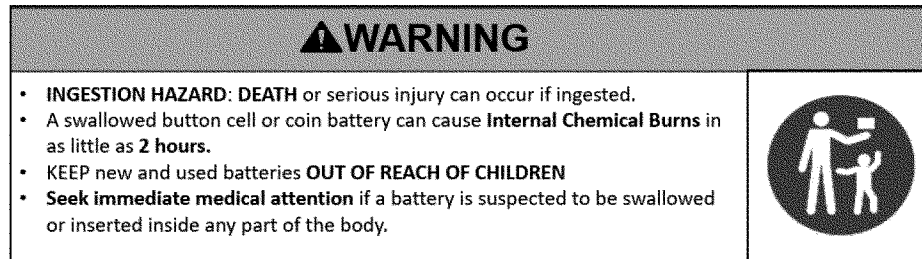
Other Text .....	0.079	0.119	0.159	0.159	0.198	0.238	0.278	0.397
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(b) *Warning label requirements for button cell or coin battery packaging.* (1) The principal display panel of the packaging must include the warning

label in figure 4 to this paragraph (b)(1). The icon must be at least 8 mm (0.3 inches) in diameter. The text must state

the following warnings as shown on figure 4 to this paragraph (b)(1).

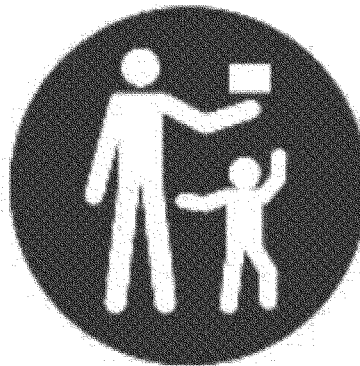
**Figure 4 to Paragraph (b)(1)**



(2) If space prohibits the full warning label shown in Figure 4 to paragraph (b)(1), place the icon shown in figure 5 to this paragraph (b)(2) on the principal display panel with the text shown in figure 6 to this paragraph (b)(2) on the secondary display panel. The icon must be at least 20 mm in diameter. The text must state the following warnings as

shown on figure 6 to this paragraph (b)(2):

**Figure 5 to Paragraph (b)(2)**



**Figure 6 to Paragraph (b)(2)**

**WARNING** INGESTION HAZARD • DEATH or serious injury can occur • A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours** • KEEP new and used batteries **OUT OF REACH OF CHILDREN** • **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.

(3) The following safety-related statements must be included on the principal display panel or secondary display panel:

(i) The statement: Keep in original package until ready to use.

(ii) The statement: Immediately dispose of used batteries and keep away from children. Do NOT dispose of batteries in household trash.

(iii) The statement: Call a local poison control center for treatment information.”;

(iv) Battery type (e.g., LR44, CR2032);

(v) Battery chemistry (e.g., silver oxide or lithium);

(vi) Nominal voltage;

(vii) Year and month or week of manufacture or expiration date;

(viii) Name or trademark of the manufacturer or supplier;

(ix) The statement: “Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.”;

(x) The statement: “Ensure the batteries are installed correctly according to polarity (+ and -).”;

(xi) The statement: “Remove and immediately discard batteries from equipment not used for an extended period of time.”;

(xii) The statement: “Non-rechargeable batteries are not to be recharged.”; and

(xiii) The statement: “Do not force discharge, recharge, disassemble, heat above (manufacturer’s specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.”.

(xiv) For button cell or coin batteries that are packaged and included separately with a consumer product, only paragraphs (b)(1) and (2) of this section apply.

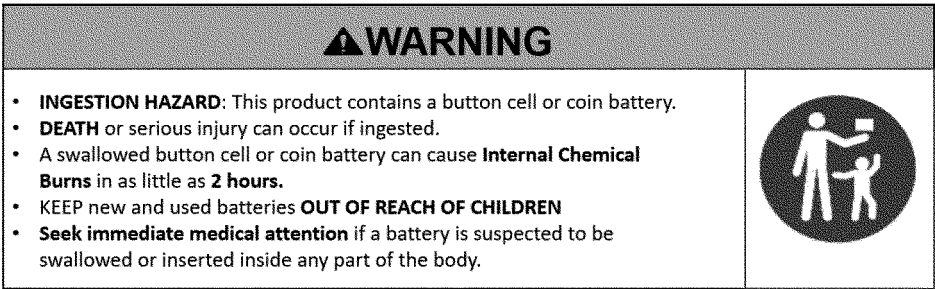
(c) *Warning label requirements for packaging of consumer products*

containing button cell or coin batteries.  
(1) The principal display panel must contain the warning label in figure 7 to

this paragraph (c)(1). The icon must be at least 8 mm in diameter. The text must

state the following as shown in figure 7 to this paragraph (c)(1):

Figure 7 to Paragraph (c)(1)



(2) Consumer products that are not contained in packaging must have the warning label in Figure 7 to paragraph (c)(1) affixed to the consumer product with a hang tag or a sticker label.  
(3) If space on the principal display panel of the consumer product

packaging does not permit the warning label in Figure 7 to paragraph (c)(1), the principal display panel must include the warning in figure 8 to this paragraph (c)(3) in a conspicuous location. The icon must be at least 8 mm in diameter. The remaining warning statements must

be on a secondary display panel, as shown in figure 9 to this paragraph (c)(3). The text must state the following on the principal display panel as shown in figure 8 to this paragraph (c)(3):

Figure 8 to Paragraph (c)(3)

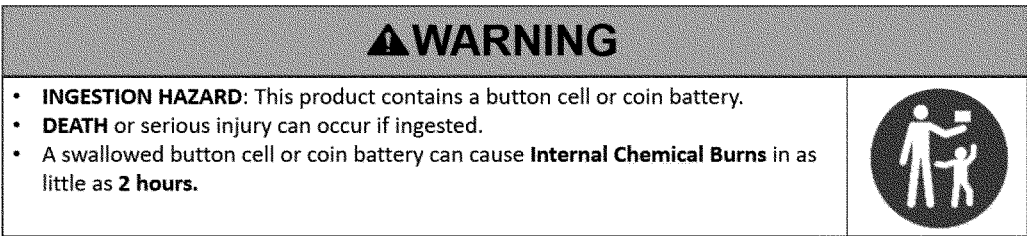
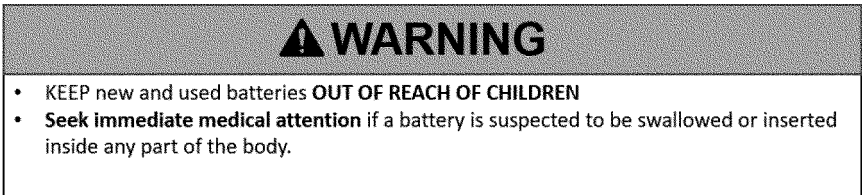


Figure 9 to Paragraph (c)(3)

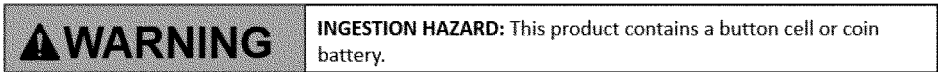


(4) The text must state the following on the secondary display panel as shown in Figure 9 to paragraph (c)(3).  
(5) The principal display panel or secondary display panel of the consumer product packaging, or if there is no consumer product packaging, the accompanying hang tag or sticker label, must include the following text:

(i) For products with non-replaceable batteries, include a statement indicating the product contains non-replaceable batteries;  
(ii) Battery type (e.g., LR44, CR2032); and  
(iii) Nominal voltage.  
(d) Warning label requirements for consumer products containing button cell or coin batteries.

(1) Consumer products must be durably and indelibly marked with a warning label on the product display panel that alerts the consumer of the presence of a button cell or coin battery. The warning text must include the safety alert symbol, signal word, and text, as shown in figure 10 to this paragraph (d)(1).

Figure 10 to Paragraph (d)(1)



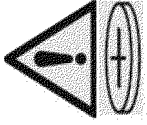
(2) If space on the product is limited, use the "Warning: contains coin

battery" icon shown in figure 11 to this paragraph (d)(2), without text. The icon

must be at least 7 mm in width and 9 mm in height and must be on the

product display panel and must be in yellow with black outlines as shown in figure 11 to this paragraph (d)(2). The icon must be defined in accompanying printed materials such as instructions, manual, insert, or hangtag.

**Figure 11 to Paragraph (d)(2)**



(3) If the product itself is too small to include the warning with text in Figure 10 to paragraph (d)(1) or the icon in Figure 11 to paragraph (d)(2), the product must:

- (i) Have packaging containing the warning label following the requirements in paragraph (c) of this section; or
- (ii) Contain a hangtag or sticker label with the full warning label using requirements for the packaging of consumer products containing batteries in paragraph (c) of this section.

**(e) Instructions/Manuals**

*accompanying consumer products containing button cell and coin batteries.* (1) Instructions and manuals, if provided, must include the warning label shown in Figure 7 to paragraph (c)(1) and the following warning statements:

- (i) The statement: “Immediately dispose of used batteries and keep away from children. Do NOT dispose of batteries in household trash.”;
- (ii) The statement: “Even used batteries may cause severe injury or death.”;
- (iii) The statement: “Call a local poison control center for treatment information.”;
- (iv) Compatible battery type (*e.g.*, LR44, CR2032);
- (v) Nominal voltage;
- (vi) For products with non-replaceable batteries, include a statement indicating the product contains non-replaceable batteries;
- (vii) The statement: “Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.”;
- (viii) The statement: “Ensure the batteries are installed correctly according to polarity (+ and -).”;
- (ix) The statement: “Remove and immediately discard batteries from equipment not used for an extended period of time.”;
- (x) The statement: “Non-rechargeable batteries are not to be recharged.”; and
- (xi) The statement: “Do not force discharge, recharge, disassemble, heat above (manufacturer’s specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.”.

(2) If instructions and manuals are not provided, the warning statements in paragraph (e)(1) of this section must be present on the principal display panel or secondary display panel of the consumer product packaging, or if there is no consumer product packaging, the accompanying hang tag or sticker label.

**(f) Online information.** Manufacturers shall include, in a manner that is clearly visible, prominent, and legible (either next to the product description, the product image, or the product price):

- (1) in their online materials that enable consumers to purchase button cell or coin batteries, the warning in Figure 4 to paragraph (b)(1); and
- (2) in their online materials that enable consumers to purchase products containing button cell or coin batteries, the warning in Figure 7 to paragraph (c)(1).

**§ 1263.5 Severability.**

The provisions of this part are separate and severable from one another. If any provision is stayed or determined to be invalid, it is the Commission’s intention that the remaining provisions shall continue in effect.

**Alberta E. Mills,**

*Secretary, Consumer Product Safety Commission.*

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