

**INTERPRETATIONS RELATED TO ASTM F963-16 and ASTM F963-17, Standard Consumer Safety Specification on Toy Safety**

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N/A	ATVs; Ride-on Toys	Is there an interim set of guidelines to assess whether a battery-powered ride-on is a toy subject to the requirements of ASTM F963 as opposed to a Youth All-Terrain Vehicle (“Y-ATV”) to be used until such time as ASTM F963 can be revised to include a definition that would supersede such guidance?	<p><u>Background:</u>                      ASTM F963 (and similarly, standards such as EN71-1 or ISO 8124-1) has long regulated ride-on toys within its scope and was adopted as a mandatory federal regulation by congressional statute in 2008. ASTM F963 does not contain an explicit definition of a ride-on toy (incidentally, nor do EN71-1 or ISO 8124-1), however within the ASTM toy safety standard, ride-on toys powered by the muscular action of the child have clearly been understood as toys, and, historically, there has been a clear demarcation between battery-operated ride-on toys that are styled to look like adult vehicles (whether it was a child’s version of a sports car, jeep, dune buggy or ATV) – and their real-life counterparts. In recent years, however, as some ride-on toys have become more sophisticated and have increasingly more realistic external features, and Y-ATVs have begun to use lithium-ion battery technology and</p>	<p>On an interim basis only, until such time as the F15.22 Subcommittee can consider this issue, the following are to be considered features strongly suggestive of a battery-operated (“electrically- driven”) ride-on toy. Not all these features need be present for the item to be considered a ride-on toy, and these features are in addition to all relevant existing requirements in the current published edition of ASTM F963:</p> <ol style="list-style-type: none"> <li>1) Item is explicitly marketed as a ride-on toy. This factor is to be given substantial weight.</li> <li>2) Item packaging/product labeling etc. clearly conveys that intended use is on generally level ground, including paved surfaces such as sidewalks and park walkways or unpaved areas such as lawns, gardens, and yards, whether grassy or not; there shall not be depictions, etc. of uses inconsistent with the above, for example on</li> </ol>	03/21/23

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			<p>be marketed to younger ages, a significant overlap has developed in definitions of Y-ATV in the All-Terrain Vehicle regulation (16 CFR 1420) and ANSI/SVIA-1 – and items which have historically been regarded as battery-powered ride-on toys within the scope of ASTM F963.</p> <p>Relevant definitions are as follows:                      16 CFR 1420:                      “All terrain vehicle or                      ATV means:                      (1) Any motorized, off-highway vehicle designed to travel on 3 or 4 wheels, having a seat designed to be straddled by the operator and handlebars for steering control;”</p> <p>ANSI/SVIA-1: “all-terrain vehicle (ATV). A motorized off-highway vehicle designed to travel on four low pressure or non-pneumatic tires (defined below), having a seat designed to be straddled by the</p>	<p>unpaved trails such as those frequented by ATVs or any suggestion that the product is a Y-ATV.</p> <p>3) Tires and suspension are appropriate for the surfaces where the item is intended to be used and tires must not be coded or otherwise marked as appropriate for use on ATV trails or similar areas intended for use by ATVs or ROVs.</p> <p>4) No functional (cosmetic elements are acceptable) suspension members intended to reduce road harshness, body sway, and/or improve steering response, or other forms of ride damping control typical of ATVs are present in any configuration; some simple suspensions such as a solid axle paired with spring-only suspension, or air shock absorbers or air springs as are commonly used on children’s toy ride-on toys, tricycles and bicycles are allowed.</p>	

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			<p>operator and handlebars for steering control.”</p> <p>Under the scope of ASTM F963, battery-operated ride-on toys (or “electrically-driven” as they are referred to in EN71-1 and ISO 8124-1) have historically been regarded as toys intended to bear the mass of one or more child occupants (subject to labeled weight limits); designed to be straddled or accommodate occupants in a seating area; typically operate at low speeds, no greater than 10 mph; and are labeled with warnings related to adult supervision, proper usage and to avoid unsafe locations and conditions, and number of riders (F963 Sections 5.3 and 5.15.1.1). Further, battery-powered ride-on toys are described as “using a battery power source that is capable of delivering at least 8 amps into any variable resistor load for a minimum of one minute” (F963, 4.25.10). Additionally, Section 1.4 of ASTM F963 provides additional</p>	<p>5) Maximum speeds are age-appropriate and conform to requirements of EN71-1 and/or ISO 8124-1.</p> <p>6) Further, as Congress has outlined in CPSIA, there are four factors that are relevant to a determination of intended use and age range:</p> <ul style="list-style-type: none"> <li>a) A statement by a manufacturer about the intended use of such product, including a label on such product if such statement is reasonable.</li> <li>b) Whether the product is represented in its packaging, display, promotion, or advertising as appropriate for use by children of the ages specified.</li> <li>c) Whether the product is commonly recognized by</li> </ul>	

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			<p>fundamental guidance for these “toy vs. real” (toy vs. toy counterpart) questions, as play and toys are often styled to mimic “real-life” items:</p> <p>“It is recognized that there is often a fine line between, for example, a musical instrument or a sporting item and its toy counterpart. The intention of the producer or distributor, as well as normal use and reasonably foreseeable abuse, determines whether the item is a toy counterpart.”</p>	<p>consumers as being intended for use by a child of the ages specified.</p> <p>d) The Age Determination guidelines issued by the Commission [CPSC] staff in September 2002 and any successor to such guidelines (latest edition: 2020).</p> <p>Note that revisions of the ATV requirements – 16CFR 1420, and/or the ANSI/SVIA-1 ATV consensus standard – may also be required, to further differentiate between ATVs and toys.</p>	
3	Terminology	<p>ASTM F963 has micro requirements for chemical materials, such as liquid, pastes, gels, powders, etc.</p> <ul style="list-style-type: none"> <li>• How do you define powder?</li> <li>• Is glitter powder?</li> </ul>		<p>When ASTM standards do not include a definition of a term used in the requirements, the ordinary dictionary definition is to be used. For powder, this is: “fine, dry particles produced by the grinding, crushing, or disintegration of a solid substance.” Glitter would not be considered a powder, as it is</p>	4/23/20

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		<ul style="list-style-type: none"> <li>What size of glitter would no longer be considered a “powder”?</li> </ul>		typically produced by vacuum-metalizing a PET sheet, then cutting the sheet into small pieces with a crosscutting die. It would therefore be considered a plastic substrate with a surface coating rather than a powder.	
4.5 (7); 8.20.1.5 (5)	Acoustic requirements for push/pull toys	<p>A) Does the language in 4.5(7) and 8.2.15 (5) mean that push/pull toys are excluded from LAFmax evaluation and limit?</p> <p>B) Stated another way, is only LCpeak SPL evaluated for push/pull toys?</p> <p>C) Does the added language in the 2017 version (highlighted) represent a change in requirements or merely a clarification of an existing requirement?</p>	<p>ASTM F963-16 Section 4.5 (7): sounds quantified by A-weighted equivalent sound pressure level, <i>L<sub>Aeq</sub></i>, produced by pull and push toys as a result of pulling or pushing. This exemption does not apply to the C-weighted peak requirement which is applicable.</p> <p>ASTM F963-16 Section 8.20.1.5 (5): Floor and tabletop toys that move, where the sound is caused as a result of the movement imparted on the toy (for example, a noise making mechanism attached to an axle of a toy vehicle) shall be tested using the method for push and pull toys. In addition to the C-weighted peak measurement a maximum A-weighted sound pressure level, <i>LAFmax</i>, shall be made and compared to the</p>	<p>A) &amp; B) Push-pull toys are subject only to an LCpeak requirement, while floor and tabletop toys are subject to both LAFmax and LCpeak. Interpreting either ASTM F963-16 or ASTM F963-17 to require both measurements for push-pull toys is incorrect, although the language of F963-16 wasn’t completely clear in this regard, hence the additional sentences added to F963-17.</p> <p>C) The additional language in section 8.20.1.5 of ASTM F963-17 was intended to clarify that, while the <u>test method</u> is the same for both push-pull and floor or tabletop toys, sound level limits for push/pull toys, which did not change, are as specified in the requirements</p>	11/20/17

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			<p>requirements of 4.5.1.3.</p> <p>ASTM F963-17 Section 4.5 (7): sounds quantified by A-weighted equivalent sound pressure level, <i>LAeq</i>, produced by pull and push toys as a result of pulling or pushing. This exemption does not apply to the C-weighted peak requirement which is applicable [language identical to ASTM F963-16].</p> <p>ASTM F963-17 Section 8.20.1.5 (5): Floor and tabletop toys that move, where the sound is caused as a result of the movement imparted on the toy (for example, a noise making mechanism attached to an axle of a toy vehicle) shall be tested using the method for push and pull toys. In addition to the C-weighted peak measurement a maximum A-weighted sound pressure level, <i>LAFmax</i>, shall be made and compared to the requirements of 4.5.1.2. The toys described in this section do not include push/pull toys as defined in 3.1.68. The scope of requirements for push/pull toys</p>	<p>section, 4.5 (7). Again, there has been no change of requirements for acoustic limits of push/pull toys between ASTM F963-16 and F963-17; the only change is additional language attempting to clarify that push-pull toys are subject only to an LCpeak requirement, while floor and tabletop toys are subject to both LAFmax and LCpeak limits.</p>	

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			are given in 4.5 (7) [Added language in ASTM F963-17 highlighted; in addition, incorrect section reference to 4.5.1.3 corrected to 4.5.1.2].		
4.11	Nails and Fasteners	<p>What is the rationale behind the requirement 4.11 Nails and Fasteners?</p> <p>Does this requirement apply to all age groups?</p>	<p>Section 4.11 reads as follows:</p> <p>4.11 Nails and Fasteners—Nails and fasteners shall not present a point, edge, ingestion, or projection hazard. Points of nails or fasteners shall not protrude so as to be accessible. Additional requirements for nails and fasteners used as axles are given in 4.17.</p>	<p>It is obvious why points and edges might apply only below 96 months of age (the CPSC regulations the ASTM requirement follows cut off there, likely because the accessibility probes are not appropriate beyond that age), and similarly why ingestion cuts off at 36 months (aligned with 16CFR 1501). ASTM F963 clause 4.8 for projections explicitly specifies a 96-month cutoff.</p> <p>That said, there does not seem to be a rationale for an age limit on protruding points of nails and fasteners (screws, other fasteners such as the brass paper fastener pictured, etc.)</p>	02/09/22

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				<p><b>Decision of Interpretations Committee:</b> Agreement that there is no defensible rationale for the 96-month cutoff for protruding points of nails, screws, and similar items, and that a 14-year age cutoff is more appropriate; further, the brass paper fastener pictured is not considered by the IC to present the same degree of hazard as these other fasteners, so it and similar items such as staples should retain a 96-month limit and continue to be evaluated for degree of hazard.</p> <p><b>Recommendation to F15.22 Subcommittee for amendment of ASTM F963:</b> Separate (and specify a 14-year age limit) for items such as protruding points of nails, screws, bolts, and similar items from that for protruding items such as staples and the brass fastener pictured, which would retain the current 96-month limit. The current 96-month limit for point, edge, and projection hazards, and</p>	



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				the current 36-month limit for ingestion hazards should both be retained.	
4.16.3	Ventilation requirements for toys that enclose the head	<p>ASTM F963 Section 4.16.3 prescribes ventilation requirements for toys that enclose the head:</p> <p>This section prescribes the following requirements for compliance, all of which must be met, and which are quite clear if only two holes are present:</p> <ol style="list-style-type: none"> <li>1) two holes must be present; and</li> <li>2) there must be a minimum distance of six inches (actually 152.4 mm, not 150 mm as the standard states) between the two holes; and</li> <li>3) the sum of the areas of the two holes must</li> </ol>	<p>ASTM F963-16 4.16.3 <i>Toys that Enclose the Head</i>—Toys that enclose the head, such as space helmets, which are made of impermeable material, shall provide means for breathing by the incorporation of unobstructed ventilation areas. The ventilation areas shall consist of a minimum of two holes, with a total of at least 2 in.<sup>2</sup> (1300 mm<sup>2</sup>) of ventilation and at least 6 in. (150 mm) between holes.</p>	<p>The rationale for the requirements of this section of the standard is to assure adequate ventilation (thus the minimum hole area requirement) and to reduce the risk of inadequate ventilation should one hole be blocked by a child’s head or an external surface (thus the requirements for at least two holes and six inches of separation between them).</p> <p>In order to clarify requirements when more than two holes are used to meet the ventilation requirement, the following interpretation is proposed:</p> <p><b>If two holes are utilized to meet the ventilation requirement of 4.16.3,</b></p>	5/4/16

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		<p>be a minimum of two square inches.</p> <p>However, if more than two holes are present, the situation is less clear regarding the minimum required distance between holes and the total area of the holes.</p>		<p><b>they must be separated by a minimum distance of six inches, and the sum of their areas must be a minimum of two square inches. If more than two holes are utilized to meet the ventilation requirement, there must be two discrete areas of ventilation holes, with these areas separated by a minimum of six inches and the total area of all holes so separated must be a minimum of two square inches. Other holes may also be present, but so long as the above conditions are met, the areas of these additional holes, as well as their inter-hole distances, are irrelevant for the purposes of determining compliance.</b></p>	
4.21	Projectile toys; stored energy projectile; KED; measuring velocity	<p>BACKGROUND INFORMATION: This product is intended for children 8+. The height of the inflatable rocket, with foam fin, is about 7 feet (2.13m). The total mass is 1.152kg [mass of water (0.760kg) plus mass of rocket (0.392kg)]. It can be launched to at least 30m in height. During flight, the water is expelled,</p>		<p>The product appears to be more properly categorized as a hobby item and not a toy, and therefore, out of the scope of ASTM F963. However, marketing and sale are key issues here in order to be out of the scope of ASTM F963, it must be marketed and sold as a hobby item and not as a toy; if the</p>	2/3/19


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		<p>in other words, the mass decreases during flight. For reference below are the steps to use the rocket: 1. Fill water in water tank 2. Connect the pump hose to the tank cap and start pumping until the gauge readings is 6 bars. 3. Hold the bulb launcher controlled by air and give a quick and hard squeeze to launch the rocket. The product has some special designs to reduce the potential impact hazard:</p> <ul style="list-style-type: none"> <li>• The rocket can only be launched in vertical orientation. When the rocket is inclined rom vertical, it will be not launch since the trigger controlled by air. The air in trigger will escape when the base is not horizontal.</li> <li>• If the launching is a failure, when opening the water tank to release air, air will be deflated slowly and the cap on water tank will not be a hazard by unexpected propulsion off the rocket.</li> </ul>		<p>item is marketed as a toy, it must comply with requirements of ASTM F963, including those related to projectiles such as KED limitations.</p>	

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		<ul style="list-style-type: none"> <li>• There is a balance plastic ring on top of the rocket to ensure the rocket drop in horizontal orientation, thus reducing the potential hazard of being struck by the descending rocket.</li> </ul>  <p>QUESTION: We think it is projectile with stored energy per ASTM F963, and have some questions about kinetic energy and Kinetic Energy Density (KED) testing.</p>			

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		<ul style="list-style-type: none"> <li>• Is this product exempted from section 4.21 in ASTM F963 since the rocket over 7 feet in height (2.13m) and it just can be launched in vertical status? It seems almost no the impact hazard when launched the rocket. Does it fall in the exemption scope for projectile inaccessible to a child when they leave the discharge mechanism?</li> <li>• If it is not exempted for section 4.21, how to test kinetic energy and Kinetic Energy Density (KED)? The weight and speed are changed during the launching. When we review the test method in ASTM F963, it is just applicable to projectile fired horizontally, it seems it is not applicable to the rocket launched vertically since it is not accelerated entirely if use this method.</li> <li>• If there is no reasonable method to measure the kinetic energy and Kinetic Energy Density (KED) for this product, can we carry the risk</li> </ul>			

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		assessment for this impact hazard? • We have an idea to conduct the performance test to ensure there is no sidetrack when launched the rocket. In this case, can we give the pass rating to ASTM F963 if the risk assessment showing the impact hazard is lower?			
4.21	Projectiles	EN71-1 considers toy catapults and similar toys where projectiles are propelled by an elastic band as projectile toys without stored energy, while ASTM F963 does not.  Will ASTM F963 will be harmonized with EN71-1?		As a preface to this conversation, one needs to understand that in the British English in which EN71 is written, “catapult” refers to what in the U.S. is termed a “slingshot”, which is specifically out of the scope of ASTM F963.  The requestor is correct that EN71-1 clause 4.17.4.3 considers such items as non-stored energy projectile toys (the 2018 amendment clarified that if projectiles are supplied with such items, the item is in scope; if no projectiles are supplied, it is not in scope of the standard). There is thus a misalignment of the two standards, largely because the scope of EN71	06/22/21

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				includes items not considered toys in the US, and due to historical exclusions from the F963 scope. While ASTM F963 does not apply to slingshots (termed catapults in EN71), other rubber-band-powered projectile launchers, whether or not they store energy independent of the user, are subject to the applicable projectile requirements of ASTM F963.	
4.21.2	Projectiles	<p>Shall a toy that projects a gel, rather than an object as defined in Section 3.1.63 be exempted from ASTM F963-16 Section 4.21.2 small part restriction?</p> <p>If the gel is exempted from the ASTM F963-16 Section 4.21.2.1 requirement, is a discharge mechanism in which the kinetic energy is determined by the toy and not by the user allowable? The gel flows freely from the gel reservoir to the firing mechanism solely under the force</p>	<p>ASTM F963-16 4.21.2 <i>Discharge Mechanisms</i>— Discharge mechanisms shall be unable to discharge potentially hazardous improvised projectiles such as pencils or pebbles without modification by the user.</p>	<p>Fluids, even viscous ones, are not discrete objects, and therefore do not meet the definition of “projectile” in F963. This is analogous to the long-established concept that squirt guns are not projectile launch mechanisms and the water stream they project is not a projectile. Therefore, the issue of stored-energy versus non-stored-energy discharge mechanisms is irrelevant for these types of products, and none of the projectile requirements are applicable.</p>	11/11/16



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		<p>of gravity. Such a mechanism is not capable of firing a solid projectile.</p> <p>If the gel is exempted from the ASTM F963-16 Section 4.21.2.1 requirement on the basis that a freely flowing 3D gel fluid is not a projectile as defined at ASTM F963-16 Section 3.1.63, would ASTM F963-16 Section 4.21.2.3 be applicable?</p> <p>Our internal interpretation is that the item and the gel should be exempted from the small part projectile requirement, as well as the kinetic energy and Kinetic energy density limits because of the following:</p> <ul style="list-style-type: none"> <li>The gel is a fluid which moves freely from the reservoir to the cylinder of the syringe, therefore</li> </ul>			

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		<p>should not be considered a Rigid Part, or a projectile.</p> <ul style="list-style-type: none"> <li>The Stored Energy Discharge Mechanism for the gel would be acceptable because it's propelling a Fluid and not a projectile as defined at ASTM F963-16 Section 3.1.63.</li> <li>The kinetic energy and kinetic energy density requirements should not be applicable because the gel is a freely flowing fluid, not a Rigid Part</li> </ul>			
4.24.4; 4.25.5	Small parts, batteries	In 4.25.4, the standard provides requirements for all batteries in toys for children under 3 years of age. In 4.25.5 the standard provides requirements for small part batteries.	4.25.4 For toys intended for children less than 3 years old, all batteries shall not be accessible before or after testing in accordance with 8.5 – 8.10, without the use of a coin, screwdriver, or other common household tool. Testing is performed using the recommended batteries installed.	The requirement is clear that one must use a screwdriver, common household tool, or coin to access the batteries. While including with the toy a special tool for this purpose would satisfy the intent of the requirements, i.e., it would accomplish the same goal of limiting battery accessibility, it does	03/30/22

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		Would the toy be compliant if the manufacturer provided a special or unique tool together with the toy which could be used to provide access (examples: tamper-resistant Torx, tamper-resistant hex, or something like the small tool provided with an iPhone to remove the SIM card)?	4.25.5 For all toys, batteries that fit completely within the small parts test cylinder shown in Fig. 3 shall not be accessible, before or after testing in accordance with 8.5 – 8.10, without the use of a coin, screwdriver, or other common household tool. Testing is performed using the recommended batteries installed.	not meet the clear wording of the standard, thus this would not be considered to comply with 4.25.4 or 4.25.5.  Suggest revising 4.25.4 and 4.25.5 to allow this additional option for battery access.	
4.24.4; 4.25.5	Coin, screwdriver, or other common household tool	Would a small Torx(R) screw (e.g., T4 or T5) be OK under 4.25.5?  Screwdriver is mentioned in the text, but the section goes on to state “or other common household tool” so perhaps a Torx(R) 4 or T5 screwdriver might not be considered OK since it is not a common enough type of screwdriver that one might find in a normal bit set?	4.25.4 For toys intended for children less than 3 years old, all batteries shall not be accessible before or after testing in accordance with 8.5 – 8.10, without the use of a coin, screwdriver, or other common household tool. Testing is performed using the recommended batteries installed.  4.25.5 For all toys, batteries that fit completely within the small parts test cylinder shown in Fig. 3 shall not be accessible, before or after testing in accordance with 8.5 – 8.10, without	<b>Interpretation:</b> Torx® screwdrivers, while becoming more common, are not yet common enough that we consider Torx® screws to constitute fasteners requiring a “common household tool” to loosen or tighten, thus use of these screws to secure the battery compartment does not comply with the requirements of 4.25.4 or 4.25.5.  <b>Proposal for Amendment:</b> 1) Add definition of “other common household tool” to section 3 to include	04/21/22

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		If, for example, a toy’s battery cover has been secured with two T4 or T5 Torx(R) screws instead of Phillips-head screws – would the toy be considered compliant to the 4.25.5 requirement?	the use of a coin, screwdriver, or other common household tool. Testing is performed using the recommended batteries installed.	standard screwdriver, Phillips-type screwdriver, and pliers. 2) Amend sections 4.25.4 and 4.25.5 to allow other fasteners, but only if the manufacturer supplies a tool with the toy to be used to loosen and tighten them.	
4.25.11.6	secondary cells; secondary batteries; normal use and discharging; surface temperatures	Regarding the new section 4.25.11.6 (in the update from ASTM F963-11 to ASTM F963-16:  <i>4.25.11.6 Normal use charging and discharging of a secondary battery when tested in accordance with 8.19.1, 8.19.2, and 8.19.3, shall not result in surface temperature rises on any battery surfaces or any other accessible surface of the toy exceeding: (1) 25°C if the surface is substantially metal, (2) 30°C if the surface is ceramic or glass, (3) 35°C if the surface is wood or plastic. If the battery is permanently installed in the toy, do not disassemble the toy to reach the battery.</i>	4.25.11.6 Normal use charging and discharging of a secondary battery when tested in accordance with 8.19.1, 8.19.2, and 8.19.3, shall not result in surface temperature rises on any battery surfaces or any other accessible surface of the toy exceeding: (1) 25°C if the surface is substantially metal, (2) 30°C if the surface is ceramic or glass, (3) 35°C if the surface is wood or plastic. If the battery is permanently installed in the toy, do not disassemble the toy to reach the battery.	As written, Section 4.25.11.6 is clearly intended to limit temperature rise due solely to the normal charging and discharging of the secondary battery(ies). It limits the temperature rise due to unintended or incidental heating either of the battery surface (if such is accessible) or heat generated by the battery and/or its associated circuitry and conducted through intervening materials to accessible surfaces.  If a toy contains a heating element or other means intended to create a temperature rise, such heating is outside the scope of 4.24.11.6.	8/20/18

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		<p>Our understanding of the wording "<b>result</b> in surface temperature rises on any battery surfaces <b>or any other accessible surface</b>" means "because of direct contact between the cell, due to physical transmission of heat" (which is what the rules are about), rather than through circuitry to a heating element.</p> <p>However, there are test centers who are inferring it to mean a rise "by any means", whether through contact or not.</p>		<p>In consideration of this interpretation question, however, there was additional discussion regarding temperature rise and battery power. As a result, the following additional information is provided/recommended, even though peripheral to the original question.</p> <p>Potential amendment to recommend to ASTM F15.22: While temperature limits for heating elements (as well as other toy surfaces) exist in the standard for toys operating from 120-volt household mains circuits (through incorporation of 16CFR 1505 by reference and in Section 4.4), an amendment to extend temperature limits of 16CFR 1505.7 to toys operating from battery power may be worth consideration.</p>	

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4.40	Small part requirement ; age grade scope, 16 CFR 1501, ASTM F963, expanding materials	Does the small part requirement for expanding materials requirement in Section 4.40 follow the small parts requirements of 16 CFR 1501 to age 8 years or follow the ASTM F963 age grade scope up till age 14 years?  In other words, should the lab evaluate expanding materials that are age graded over age 8 years?		16 CFR 1501 makes no reference to eight years of age, unlike 16CFR 1500.53.  The expanding materials requirement applies to all as-received small parts which meet the 50% expansion criterion, regardless of age grade, up to 14 years. The small parts requirement is not included within the scope of “use-and-abuse testing” as such term is used in F963. It is thus not subject to the cutoff at eight years of age as are many use-and-abuse tests in F963.	03/16/21
4.41	Toy Chests	Regarding the Toy Chest requirements, added back into ASTM F963-16: Now that the requirements for Toy Chests are (again) part of the ASTM F963-16 toy standard does that mean Toy Chests are considered "toys" and now subject to all the other requirements within ASTM F963-16? What about to the toy		(Background: The Toy Chests requirements were in the F963-07e1 version of the standard originally made mandatory by CPSIA. When they were removed, CPSC did not accept this change to the mandatory rule; and so they continued to be mandatory, even if no longer found within ASTM F963. The addition of the Toy Chest requirement back into F963-16 serves	11/11/16

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		requirements of the CPSIA regulations?		<p>to reflect their status as mandatory, within a mandatory rule).</p> <p>However, this does not make toy chests "toys". Rather, they are items of furniture intended to store toys; as such, they are children’s products as defined in CPSIA. Their addition back into F963 serves only to return them to their location within a mandatory federal rule.</p> <p>Therefore, toy chests are subject only to the following requirements:</p> <ol style="list-style-type: none"> <li>1) Section 4.41 (Toy Chests) of ASTM F963-16;</li> <li>2) Any CPSIA requirements applicable to children’s products such as lead in surface coatings and substrates, tracking labels, etc.</li> </ol> <p>One exception to this interpretation would be if a toy chest incorporates toy or toy-like elements with play value; in these cases, the toy</p>	



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				<p>attachments would be subject to all other applicable sections of ASTM F963.</p> <p><b>Proposal of Amendment Language:</b>                      “1. X The inclusion of toy chests (4.41) in the standard does not make a toy chest a "toy". Rather, they are items of furniture intended to store toys; as such, they are children’s products as defined in CPSIA. Their inclusion in the standard serves only to place them within a mandatory federal rule.”</p>	
8.4.1	Cleanliness of products used in toys; USP 62	If the product can meet requirements of USP according to USP 62 test, i.e., the result of Pseudomonas aeruginosa, Salmonella ssp. and Staphylococcus aureus is absent, then is it also considered to meet the requirements of ASTM F963 microorganisms (Pseudomonas sp., Salmonella sp. and Coagulase positive Staphylococcus sp.)?	<p>ASTM F963 requires the following:</p> <p>4.3.6.3 <i>The cleanliness of these products used in toys and their ingredients shall be determined in accordance with 8.4.1.</i></p> <p>8.4.1 Cleanliness of Materials—<i>The cleanliness of cosmetics, liquids, pastes, putties, gels, powders, and avian feather products used in toys (excluding art materials) shall be determined using the methods in USP 35 &lt;61&gt; and &lt;62&gt;</i></p>	<p>1) USP 62 specifies <i>P. aeruginosa</i> as this is the major human pathogen; ASTM F963 casts the net a bit more broadly to encompass all <i>Pseudomonas</i> species (there are about 200) because a couple of others (<i>P. mallei</i>, <i>P. pseudomallei</i>) can also be pathogenic; that said, if only non-pathogenic <i>Pseudomonas</i> species are isolated, this is acceptable as a result for F963.</p>	06/21/22

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			<p><i>coagulase positive Staphylococcus sp., and Salmonella sp. (plus Shigella sp. for avian feather products – this organism to be isolated using methods outlined in the latest edition of the FDA Bacteriological Analytical Manual) shall not be detected.</i></p>	<p>are known human pathogens. Presence of any of these is a failure of F963, but again, the isolation methods in USP 62 may be used. I have attached a copy of USP 62 for your reference.</p> <p>Thus, while USP 61 &amp; 62 are approved test methods, the acceptance criteria of those standards differ from those of F963. While meeting USP 61 &amp; 62 would obviously meet the F963 requirement for E. coli, meeting the USP limits would <u>not</u> meet the F963 requirements for Staph, Pseudomonas, and Salmonella. That said, it is possible to meet the F963 requirements by minor modification of the USP isolation methods.</p> <p>Additional language should be added to ASTM F963 to more clearly distinguish F963 requirements from those of USP 51/61/62.</p>	

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8.8	torque test; order of testing direction	<p>Our question is in relation to the torque test specified in Section 8.8. This section indicates that: The torque shall be applied evenly within a period of 5 s in a clockwise direction until either (1) a rotation of 180° from the original position has been attained, or (2) the required torque is exceeded. The maximum rotation or required torque shall be maintained for an additional 10 s. The torque shall then be removed, and the test component permitted to return to a relaxed condition. This procedure shall then be repeated in a counterclockwise direction.</p> <p>Does testing need to be performed in that specific order, or could a test laboratory instead perform the torque test in the counterclockwise direction, followed by the clockwise direction?</p>		<p>The reason that ASTM F963 specifies the order in which clockwise and counterclockwise torque testing is to be performed is because this order is specified in a longstanding (1975) U.S. federal regulation, codified at 16CFR 1500.51/52/53 (the three sections address three age ranges). Therefore, to keep F963 testing aligned with this requirement, the same order is retained in F963. The reason that the federal regulation specifies this order of testing is lost to history, but it could be surmised that specifying a test order benefits test result consistency (even though it would likely be rare that reversing the order of testing would yield a different result), and that a right-handed person would be more likely to apply a torque in the clockwise direction, thus this direction was specified to be applied first. The purpose of the torque test is to simulate use or abuse that a child might apply to the toy, with any resulting potentially hazardous</p>	06/15/21

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		<p>This relates to cases where products could have a screwed cap, which is used to secure a hazardous component. The application of the force in the clockwise direction first would tighten this cap in place and make it harder for the cap to be released during testing in the counterclockwise direction. We think that the spirit of the standard is to require that components be secured so a child cannot have access to a toy's hazardous contents. It is foreseeable that a child could apply a force in any direction (clockwise or counterclockwise) and that therefore, the torque test should be done in any sequence, especially where the testing sequence may influence the results such as what is described above. However, as written presently, the standard seems very specific and does not allow for discretion. The present sequence in</p>		<p>condition due to breakage (such as small parts, sharp points or edges, etc.) to be evaluated for hazard exposure. In the example the requestor uses as an illustration, if a screw cap is intended to be unscrewed or is loose as received, this would generally be considered a removable component, and any hazard exposed by unscrewing it would be considered to exist in the as-received state.</p>	

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		<p>torque testing may bring a product with a loose component in compliance because the clockwise torque tightens this loose component before testing it in the counterclockwise direction.</p> <p>Could you please provide some insight on how this section is interpreted?</p>			
8.7.1	Water guns; Drop Test, Impact Test	Should a water gun be filled with water before performing drop test per 8.7.1?		<p>Water guns should be filled with water up to full capacity, or the upper weight limit for the filled toy as below, whichever is less (table from 8.7.1):</p> <p><i>Age Group Weight Criteria, lb (kg)</i>  <i>18 months or less</i>  <i>less than 3 ± 0.01 (1.4)</i>  <i>over 18 months, not over 36 months</i>  <i>less than 4 ± 0.01 (1.8)</i>  <i>over 36 months, not over 96 months</i>  <i>less than 10 ± 0.01 (4.5)</i></p> <p>This is analogous to the requirement in 8.7.1 that battery-operated toys should</p>	06/25/18

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				<p>be tested with batteries (either those recommended by the manufacturer, or if none are recommended, the heaviest commonly available type).</p> <p>This interpretation is also consistent with the following definitions in ASTM F963:</p> <p>3.1.37 hazard—any characteristic of a toy that presents an unreasonable risk of injury or illness during normal use or as a result of reasonably foreseeable abuse.</p> <p>To further define normal use, the standard states the following:</p> <p>3.1.53 normal use—play modes that conform to the instructions accompanying the toy, that have been established by tradition or custom, or that are evident from an examination of the toy.</p>	



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Section	Keyword(s)	Request for Interpretation	Text from ASTM F963-16 or ASTM F963-17 (specified below)	Interpretation	Date of Interpretation
				This would strongly suggest that reasonably foreseeable abuse testing should be performed in a manner consistent with normal, expected, or intended use, which in the case of water guns would be when filled with water.	
8.30.8	Water beads, expanding materials; expanding materials test method	<p>I have a question regarding the ASTM F963 test method for expanding materials. It currently states the following:</p> <p>8.30.8 While the toy or component is submerged in deionized water at 37 +/- 2°C (98.6 6 3.6°F), attempt to push the object through the gauge pictured in <b>Fig. 30</b> (starting from the radiused side) with a force perpendicular to the flat surface of the gauge of up to 20 N (4.5 lbf) using a 10 mm (0.394-in.) diameter rod with a hemispherical end, with the rod roughly centered within the hole in the gauge. Position the toy or</p>		While not explicitly stated in the standard, the determination of a “pass” result for this test has always been considered to include a loss of structural integrity or breakage of the expanding beads, such that they are then able to pass through the gauge in Figure 30, whether or not such loss of integrity or breakage occurs before or during the testing in 8.30.8. This is because an item in pieces under these conditions no longer presents the intestinal blockage risk described in ASTM F963 A12.3, and no data has been presented which would change this interpretation. Conversely, if an expanding bead were to experience breakage when the force is applied but still not be able to pass through the	04/13/23

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		<p>component in the orientation least likely to pass through the gauge opening.</p> <p>When I run the test for water beads, I've noticed that some of them grow so much that they fall apart. Additionally, some small (approximately 2mm diameter) beads grow to around 12-15mm in 48 hours but maintain their shape.</p> <p>During testing with the radiused test rod, when the 20N (4.5lbf) load is applied, the water beads break apart and then pass through the test gauge. Can you confirm that this situation is a passing result?</p>		<p>gauge, it would not meet the requirement and would be considered to be a failing result.</p> <p>Section 8.30 is due to be reviewed by an ASTM F15.22 work group and this will include potential amendments to clarify intent and application.</p>	