INTERPRETATIONS RELATED TO ASTM F963-11, *Standard Consumer Safety Specification on Toy Safety*

NOTE: Interpretations are subject to change. The Toy Safety Subcommittee that writes ASTM F963, in the normal course of business, reviews all interpretations to assess if a revision to the standard is warranted. An interpretation may or may not result in a change to the standard. All interpretations pertain to the current revision of ASTM F963.

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1.4	Sling shots	The scope of ASTM F963, under Section 1.4, excludes sling shots -- and it is understood that this relates to regular sling shots (such as wooden general use ones, for example). The standard makes no mention of the toy counterpart -- that is, a toy slingshot – made of plastic and/or foam, for example, specifically targeted to children (photo provided as example of the type of product). Would such items be considered toys and need to comply with F963 (excluding the projectile toy requirement) or are they exempt from the standard under Section 1.4?	1.4 Articles not covered by this specification are as follows: Bicycles Tricycles Non-Powered Scooters (see Consumer Safety Specification F2264) Recreational Powered Scooters and Pocket Bikes (see Consumer Safety Specification F2641) **Sling shots and sharp-pointed darts** Playground equipment Non-powder guns Kites Hobby and craft items in which the finished item is not primarily of play value Model kits in which the finished item is not primarily of play value Crayons, paints, chalks, and other similar art materials in which the material itself or the finished item is not primarily of play value, except that all art materials, whether or not a component of a toy, must comply with LHAMA, in accordance with 4.29.1-4.29.3. Toy Chests Sporting goods, camping goods, athletic equipment, musical instruments, juvenile products, and furniture; however, toys that are their counterparts are covered. (It is	**"Traditional" slingshots used for sport or hunting are sporting goods and are outside the scope of ASTM F963, but toy counterparts are toys marketed to children and are within scope.** That said, such items, while toys, would not be required to meet the requirements for projectile toys at 4.21, as they do not store energy independent of the user, and more importantly, the kinetic energy of the projectile is determined by the user and not the discharge mechanism. While not technically "projectiles" under the definition at 3.1.59, the projectile-related hazards of these types of toys are readily apparent and easily avoided by the user. Despite the fact that the "projectile" requirements at (Section 4.21) do not apply, the other applicable requirements of F963 must be met by these types of toys. Recommend that the ASTM F15.22 subcommittee evaluate whether a clarifying amendment to section 1.4 is warranted for such items as suction cup darts and others.	3/31/14

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			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.) Powered models of aircraft, rockets, boats, and land vehicles; however, toys that are their counterparts are covered. Constant air inflatables		
3.1 4.5.1.2 8.19.1.3 (4) 8.19.1.4 (3)	Push/Pull toys	What is the definition of a push/pull toy? This type of toy is referenced in the Safety Requirements and Test Methods sections but is not specifically defined. There is differing understanding of this in the market. Consider this example: a toy that is intended for floor or table top play where the intended play pattern is for the child to push/pull the toy with their hand, thus generating motion and sound. Would this be classified as a push/pull toy -- due to play pattern? Or is a push/pull toy intended for use by a child in a standing/upright position and thus the following definition would address this question: *3.1.X Push/Pull Toys - a toy with a*	4.14.1 *Cords, Straps, and Elastics in Toys*— Cords or elastics included with or attached to toys intended for children less than 18 months of age (excluding pull toys, see 4.14.3) shall be less than 12 in. (300 mm) long when measured to the maximum length in a free state and under a load of 5 lb (2.25 kg). If cords/straps/elastics or multiple cords/straps/ elastics can tangle or form a loop in connection with any part of the toy, including beads or other attachments on the ends of cords/straps/elastics, the loop shall not permit the passage of the head probe (Fig. 10) when tested in accordance with 8.22. *…section text continues in standard …*	The intended meaning of "push/pull toy" is a product intended to be used on the floor or ground, with the child in an upright or standing position, and which thus requires an attached handle, cord, or similar element; this represents how the term has historically been used in the market. We concur with the requestor's proposal to add a definition for "push/pull toy" to section 3.1 of the standard and with the wording suggested. Further propose that the ASTM F15.22 subcommittee evaluate whether the term "pull toy" currently utilized in sections 4.14.1 and 4.14.3 should be revised to	8/28/12

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		cord/tether and/or a handle attached to the toy and where the toy is intended for use on the ground with the child in a standing/upright position, typically walking, while using the toy.		"push/pull toy."	
3.1.56 16 CFR 1500.48	Sharp points and sharp edges	In regards to assessing sharp points for children's products (toys), both ASTM F963 and related 16 CFR1500.48 utilize the sharp point tester. ASTM further defines "*point, hazardous*" as "an accessible point that presents an unreasonable risk of injury during normal use or reasonably foreseeable abuse. Points on toys intended for children under the age of 8 years are potentially hazardous if they fail the sharp point test described in 16 CFR 1500.48." The underlined statement in the ASTM definition could be interpreted as the illumination of the sharp point tester deems a failure to ASTM F963. However, the CFR provides the following language related to performing a risk assessment to determine if any regulatory action is warranted: "The Commission will further evaluate points that are identified as presenting a potential risk of puncture or	3.1.56 *point, hazardous*—an accessible point that presents an unreasonable risk of injury during normal use or reasonably foreseeable abuse. Points on toys intended for children under the age of 8 years are potentially hazardous if they fail the sharp point test described in 16 CFR 1500.48. *…section text continues in standard …* 16 CFR 1500.48 1500.48 Technical requirements for determining a sharp point in toys and other articles intended for use by children under 8 years of age. (a) *Objective.* The sharp point test prescribed by paragraph (d) of this section will be used by the Commission in making a preliminary determination that points on toys and other articles intended for use by children under 8 years of age, and such points exposed in normal use or as a result	**If a point or metal/glass edge "fails" the technical requirement, labs should proceed to a hazard evaluation, and if a determination is made that no unreasonable risk of injury exists, a simple "pass" report should be issued. A lab may indicate that the determination was based upon a hazard evaluation.** The intent is for ASTM F963 to mirror the requirements in 16CFR 1500.48 and 1500.49 -- and subsequently to include a risk assessment as needed. The sharp point test and the sharp edge test for metal and glass edges are both technical requirements intended only to provide initial triage; if a "failure" of one of these technical requirements occurs, it is intended that there be a subsequent evaluation of the hazard presented (if any) to determine if an unreasonable risk of	12/11/13

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		laceration injury to determine the need for individual product regulatory action." The question is, are CPSC accredited 3rd party laboratory allowed to perform risk assessments if a technical sharp point is identified (illumination of the sharp point tester) in determining compliance with ASTM F963 and 16CFR1500.48 --- or is this reserved for the Commission?	of reasonably foreseeable damage or abuse of such toys and articles, present a potential risk of injury by puncture or laceration under section 2(s) of the Federal Hazardous Substances Act (15 U.S.C. 1261(s)). The Commission will further evaluate points that are identified as presenting a potential risk of puncture or laceration injury to determine the need for individual product regulatory action. *……. section text continues in CFR ……*	injury exists. Such factors as type of material, location on the product (e.g. if a sharp point is on a small broken-off piece which is likely to be discarded, this would be of lesser concern than one remaining on a functional product, and a sharp point on an area of the product that is frequently handled would likely be of greater concern than one in an area where only incidental contact can be made, or that is difficult to access), etc. should be considered as part of this evaluation. Perhaps the most salient example is a common paper clip-when an end is bent out, it enters and lights the sharp point gauge due to its dimensions (diameter <0.040"), but this would not be considered to present an unreasonable risk of injury. The intent is for CPSC-accredited labs to be able to perform this type of evaluation. CPSC always has been clear that 16CFR 1500.48 and 1500.49 are technical requirements only, and are not intended to be self-banning; the regulations are in fact titled "Technical Requirements" and contain the following language: "Objective. The sharp point [edge] test	

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				prescribed in paragraph (d) of this section will be used…in making a *preliminary* determination…" The language referring to the staff is intended to mean that while the staff will be required to use these tests, it is assumed others will also do so as a preliminary step in determining compliance with the ultimate and only meaningful requirement, i.e. that an unreasonable risk of injury not be present.	
3.1.78; 4.14.1; 4.14.3	Plastic Tips on strings and cords	Is there a specific interpretation or other guidance that says that the plastic tips on shoelaces are not considered attachments that could tangle and form a noose? EN71-1 has a section, A29, with the explicit comment: "Note that plastic tips on shoelaces are not considered as attachments likely to form a *noose*." Is there a similar application in the U.S.?	3.1.78 *tangle or form a loop*—loops that are formed by reasonably foreseeable manipulation of the cord/strap/elastic. Loops that are formed by excessive or intricate manipulations, or both, of the cord/strap/elastic shall be considered as exempt.	**CPSC has not, to our knowledge, issued guidance on this specific question.** It is our intent to interpret ASTM F963 only, however, the interpretation for ASTM F963 with regard to plastic shoelace-type tippets or aglets is the same as that in the EU (as outlined in EN71-1, Clause A29). This interpretation is intended to apply to tips which have essentially the same or similar outside diameter as the cords they terminate, and do not have any significant flanges or other protrusions which would increase the likelihood of tangling. Further, Section 3.1.78 of ASTM F963-11 states the following: "*tangle or form a loop*—loops that are formed by reasonably foreseeable manipulation of	11/1/12

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				the cord/strap/elastic. Loops that are formed by excessive or intricate manipulations, or both, of the cord/strap/elastic shall be considered as exempt." Plastic tippets on the end of a cord are not considered attachments which could tangle to form a noose or other looping strangulation hazard when subjected to a reasonable degree of manipulation.	
4.3.5.2 (2)(c) 8.3.1.3	Testing for cadmium in small metal parts	This last sentence of section 8.3.1.3 appears to contradict the underlined text in Section 4.3.5.2(c) since it bypasses the screening test provision. Furthermore, the 200ug limit is not directly comparable to the values in either table unless a further calculation is made. Clarity is needed around this point as labs may be needlessly testing compliant products.	Section 4.3.5.2(2)(c) In addition, metallic toys or metallic toy components which are small parts may not exhibit extraction of more than 200 µg of cadmium when tested per 8.3.5.5(3). Compliance with all of the above requirements may be established by a screen of total element content as specified in 8.3.1. *(Underlined for emphasis)* Section 8.3.1.3 Resulting digested material is to be filtered and diluted as prescribed, then analyzed by atomic spectroscopy or other appropriate validated method for total content of all eight elements listed in Table 1 and Table 2; if results are below soluble limits for each element as prescribed in the appropriate table, the material can be considered to conform to requirements of 4.3.5 or 4.3.5.2, or both, without further	**A material screened for total cadmium concentration and found to be below 75ppm can also be considered compliant with the 200ug limit without the need for further testing.** Section 8.3.1.3 provides for a total element screen to demonstrate compliance for all of the soluble requirements, *including* the special test for soluble cadmium in metallic small part components. This is the intention, and is consistent with discussions with CPSC staff. Since solubility of cadmium in the '24-hour special test for soluble cadmium in metallic small part components' is relatively low (on the order of 5% or less	5/23/12

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			testing. If soluble limits in the appropriate table are exceeded, additional testing per 8.3.2 (for paint and similar surface-coating materials) or 8.3.5 (substrate materials) will be required to confirm compliance. In addition, if the toy or toy component is a metallic small part, it is to be tested per 8.3.5.5(3). *(Underlined for emphasis)*	of the total cadmium present), materials with a total cadmium content significantly higher than 200ug will still be compliant for soluble cadmium. Thus, materials and components tested to the total content screening method for cadmium and meeting the general soluble limit of 75ppm will be virtually certain to also comply with the 200ug limit in the 24-hour test. ASTM subcommittee F15.22 has addressed this by developing clarifying amendments to be incorporated into a subsequent revision of the standard.	
4.6.2	Small parts, mouth actuated toys	Does section 4.6.2 apply to toys intended for children 3 years and older? The preamble in 4.6 indicates that "These requirements are intended to minimize...to children under the age of 36 months of age created by small parts." The requirement at 4.6.1 specifies that it applies to children under 36 months. Section 4.6.3 makes specific reference to ages between 3 years and 6 years. Section 4.6.2 makes no mention of any specific age group and would presumably	4.6.2 *Mouth-Actuated Toys*—This requirement relates to toys, such as noisemakers, that are intended to be actuated repeatedly by blowing or sucking. Mouth-actuated toys that contain loose objects, such as spheres in a whistle, or inserts, such as reeds in a noisemaker, shall not release an object that will fit within the small parts test cylinder, as shown in Fig. 3, when air is alternately blown and sucked rapidly through the mouthpiece, according to the procedure described in 8.13. The procedure of 8.13 shall also be applied to the outlet if the air outlet is capable of being	**The requirement for mouth-actuated toys in 4.6.2 applies to all ages up to 14, as the specific hazard addressed does not cease at age three.** Small parts are generally not considered an issue for children older than three due to the fact that mouthing behavior of objects not intended to go into the mouth drops off dramatically by 18 months of age and virtually ceases by age three; however, in this case, the intended use of the product is in the mouth, so the requirement in 4.6.2 addresses a hazard	3/25/13

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		only affect those indicated in the preamble of 4.6. Additionally, it would seem that the potential choking hazards from small parts released from mouth-actuated toys would include children over 3 years as well as under 3 years.	inserted into or covered by the mouth. *…section text continues in standard …*	which is use- but not age-specific. While it is believed that this interpretation has historically been understood by the industry, it is recommended that the ASTM F15.22 subcommittee evaluate whether clarifying changes are needed.	
4.3.5.2; 8.3.5.4; A10.10.1.5	Heavy metals in toy substrate materials	Are Textiles exempted from soluble HM testing? It seems that lead is exempted based on 16 CFR 1500.88 and that textiles still need to be screened and/or tested for the 7 remaining heavy elements. However, this does not seem to be totally clear throughout the testing world. Some have countered that textiles must be exempt based on this comment – "there is no test method proscribed for textiles, which further implies that an exemption was intended to apply." Can you comment any further? Regarding the Annex Section A10.10.1.5 and the clarity of the wording there, some believe that the phrase highlighted below seems to imply again that textiles are exempt from the remaining 7 elements testing since they are mentioned in the same sentence as paper and paperboard.	A10.10.1.5 The list of excluded materials is based on the regulatory exclusions provided by the U.S. Consumer Product Safety Commission (CPSC), specified at 16 CFR 1500.91, in implementation of the requirements for lead and lead paint under Section 101 of the Consumer Product Safety Improvement Act (CPSIA) of 2008. While EN 71-3 includes test methods for Paper and paperboard and Textiles (natural and synthetic), given the exemption for these products test methods for them have not been included here.	**Fabrics are exempt from the requirement to test for total and soluble <u>lead</u> only; they are still subject to testing for soluble content of the seven remaining elements. Paper and paperboard are exempt from <u>all</u> substrate testing, but fabrics/textiles are not.** CPSC has exempted dyed and undyed fabrics from total lead testing at 16CFR 1500.88 based on the low likelihood of lead being found in these materials; however, the same cannot necessarily be said of the other elements, as the data are lacking (and CPSC has not acted to promulgate an exemption). In fact, there is at least one case where an exemption may be unwise based on existing data: it is not uncommon to encounter 200-300 ppm total antimony in undyed polyester fabrics due to the use of Sb_2O_3 as a	8/28/12

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		I understand the intent is to explain why a separate test method is not listed, but the phrase – "given the exemption for these materials" seems to some to imply that since they are exempt from lead they are also exempt from the remaining 7 elements. A10.10.1.5 The list of excluded materials is based on the regulatory exclusions provided by the U.S. Consumer Product Safety Commission (CPSC), specified at 16 CFR 1500.91, in implementation of the requirements for lead and lead paint under Section 101 of the Consumer Product Safety Improvement Act (CPSIA) of 2008. While EN 71-3 includes test methods for Paper and paperboard and Textiles (natural and synthetic), given the exemption for these products test methods for them have not been included here.		polymerization catalyst (although solubility of this compound in dilute acid is low, and it is therefore expected that this material will in most cases meet the soluble limit for antimony). The lack of a specific test method for fabrics in ASTM F963-11 was not intended to convey an exemption, but instead represents differing philosophy relative to the EN71 approach: it was felt that the EU standard is unduly prescriptive, and attempts to specify a unique test method for each of a wide variety of materials (unfortunately, anticipating all materials which may be encountered isn't possible); the ASTM approach is to specify a smaller number of more broadly applicable methods which may be modified as needed to accommodate the specific material under test. ASTM subcommittee F15.22 has addressed this by developing clarifying amendments to be incorporated into a subsequent revision of the standard.	
4.3.5.2 8.3.5.5	Barriers to underlying materials,	For compliance with ASTM F963-11, should paint be considered a barrier to the underlying materials when testing to	4.3.5.2 *Toy Substrate Materials*—These requirements are designed to reduce children's exposure to heavy elements	Even the CPSC's language at 16CFR 1500.87(b) leaves some room for interpretation: "Paint, coatings, or	11/13/12

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	including paint and fabric	the soluble heavy metal substrate requirements? The example products in questions are substrate materials (metal, plastic, and wood) that are 100 % coated with paint. Is the answer dependent on the substrate material - plastic, metal/ceramic/glass, other materials (mass colored or not) like wood? Are these substrate materials considered accessible if they are covered by fabric but have at least one dimension that is less than 5 cm and can be brought to the mouth? We realize that the CPSC does not consider paint a barrier to underlying material when determining accessibility of lead bearing substances (16 CFR 1500.87). Also, if a component is encased in fabric and has at least one dimension smaller than 5 cm it is also considered accessible and needs to meet the CPSIA lead requirement. ASTM F963 clearly references the CPSC accessibility rules of 1500.87 in the total lead requirement of section 4.3.5.2(2)(a).	contained in accessible toy substrate materials. (For requirements for surface coating materials, see 4.3.5.1.) *…section text continues in standard …* 8.3.5.5 *Glass/Ceramic/Metallic Materials*: *(1) Sample Removal/Preparation Procedure*—Toys and components shall be first subjected to the relevant tests in accordance with Section 8. If any accessible glass, ceramic or metallic materials of the toy fits entirely within the small parts cylinder (see Fig. 3) before or after use and abuse testing, it shall be tested in accordance with 8.3.5.5(*2*) after removal of any coating in accordance with CPSC method CPSC-CHE1003-09; metallic materials are also to be tested in accordance with 8.3.5.5(*3*) after removal of any coating in accordance with CPSC method CPSC-CH-E1003-09. *…section text continues in standard …*	electroplating *may* not be considered to be a barrier that would render lead in the substrate to be inaccessible to a child" [emphasis added]. And while only CPSC can offer official interpretations of its regulations, as you stated in the question, the Commission staff's concern is a coating which can be scraped off or otherwise deteriorate over time (such as by wear or the flaking of a coating, or the erosion of such coating when subjected to the action of gastric acid), thus exposing the lead-bearing substrate underneath, but the use of the phrase "may not" implies that a coating of some kind might under limited circumstances be considered to be such a barrier. In all but a few instances, paint or similar surface coating materials are <u>not likely</u> to present a significant barrier to accessibility of lead or other heavy elements which may be present in the underlying substrate. These exceptions would all be applied to metal or ceramic substrates, which are to be tested per section 8.3.5.5 after removal of any scrapeable coating, but leaving any fired glaze, electroplating,	

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		However, the same accessibility rule is not mentioned at all in the substrate soluble requirements sections 4.3.5.2(2)(b) or 4.3.5.2(2)(c). In fact, under the substrate material scope, section 4.3.5.2(1) only references section 3.1.2 (which defines accessible as areas that can be contacted by any portion forward to the collar of the accessibility probe) and the use and abuse testing. Under the test method for substrate materials, section 8.3.5.3(1), "Test portions are only permitted to be composed of more than one material or color where physical separation ... precludes the formation of discrete specimens." So if a coating is not a barrier and the underlying material is accessible, this would require the coating to be removed and the two materials tested separately. Under the polymeric (8.3.5.4(1)(c)) section, it states "If the laboratory sample is not uniform in its material, a test portion shall be obtained from each different material present ..."		or similar surface treatment intact, and therefore it is irrelevant if these types of coatings present a barrier or not, except as this is determined by the tests in 8.3.5.5. Therefore your interpretation is correct, and we would state the situation as follows: **"Paint, varnish, or similar surface coating materials are not to be considered a barrier to accessibility of the underlying substrate for the purpose of heavy elements testing in ASTM F963. Metal, glass, and ceramic toys or parts of toys which are small parts and are coated with a fired glaze, electroplate, or similarly durable coating are to be tested per Section 8.3.5.5 regardless of whether such coating may arguably be considered an effective barrier to heavy elements which may be present in the underlying substrate." In other words, if a metal, glass, or ceramic small part has a scrapeable coating such as paint, such coating is removed and tested separately. If such parts also or instead have a durable coating as described above, the entire item (substrate plus coating) is tested as a single sample.**	

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		Under the glass/ceramic/metallic material (8.3.5.5(1)) section, it states "If any accessible glass, ceramic or metallic materials ... it shall be tested in accordance with 8.3.5.5(2) after removal of any coating ..." Also, under the other materials section 8.3.5.6(1)(c)), it states "If the material to be tested is coated with paint, varnish, lacquer, printing ink or similar material, remove this material per in accordance with CPSC method CPSC-CH-E1003-09 prior to testing per 8.3.5.6 (2)." It not clear why this section is worded differently from the other sections, but they all appear to require coatings and substrates to be tested separately, whether completely coated or not. I realize the intent of F963 is to comply with the CPSIA lead requirements (which does not consider a coating a barrier), and EN71:3 (which does consider a coating a barrier in certain cases - see below) when it makes sense, however, this conflicting position, along with inconsistent references, seems to be causing some of the confusion.		**Metallic small parts are of course in addition tested per 8.3.5.5(3).** ASTM F963 mirrors the test for accessibility in 16CFR 1500.87(i) -- that is, a fabric covering is considered to render internal parts of the product covered by it inaccessible if such covering remains intact after use-and-abuse testing, except where any dimension of the product or part of the product in question is smaller than 5cm. The only instance in which this would not be the case is if the fabric is laminated to an impervious polymeric material (such as a PVC or polyurethane backing), in which case the fabric covering is considered to render internal parts of the product covered by it inaccessible if such covering remains intact after use-and-abuse testing, regardless of minor dimension.	

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		According EN71:3, Annex D.10.1: "Glass, ceramic and metallic materials completely coated so that no glass, ceramic or metal is accessible as defined in EN71-1 are **not** tested according to this requirement. Where glass, ceramic and metal surfaces are accessible even when partially covered by a coating these are tested in accordance with 8.5.2 after removal of the partial coating entirely according to the method in 8.1.1." The CPSC concern with paint and coatings is that they may flake off over time and be ingested, leaving the underlying material exposed. If this concern is taken into consideration, coatings should not be considered a barrier to the underlying materials and the rules of 16 CFR 1500.87 should apply to the substrate requirement of ASTM F963-11. Is this the correct interpretation of the standard? Can you also address whether a textile is considered a barrier or not, for underlying substrates with at least one dimension less than 5 cm and that can be brought to the mouth (16 CFR 1500.87(i))?			

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4.3.5.2	Heavy Metal Testing for Other Exempted Materials	Please confirm our understanding of ASTM requirements for heavy metals with certain materials: *Paper and paperboard: Exempt from total and soluble lead (Pb) requirements Exempt from soluble requirements for seven (7) other heavy metals Fabric/textile: Exempt from total and soluble lead (Pb)Requirements Subject to soluble requirements for other seven heavy metals (HM)* What is the status regarding other exempted materials under 1500.91 such as wood, precious metal, precious gems, pearls, etc. in regard to heavy metals testing under ASTM F963-11?	4.3.5.2 *Toy Substrate Materials*—These requirements are designed to reduce children's exposure to heavy elements contained in accessible toy substrate materials. (For requirements for surface coating materials, see 4.3.5.1.) *…section text continues in standard …*	**The requirements for heavy metals, as outlined in the question and reiterated below, is correct.** Paper and paperboard: • Exempt from total and soluble lead (Pb) requirements • Exempt from soluble requirements for seven (7) other heavy metals Fabric/textile: • Exempt from total and soluble lead (Pb) Requirements • Subject to soluble requirements for other seven heavy metals Other materials exempted under 16CFR 1500.91 such as wood, precious metal, precious gems, pearls, etc. are exempt from the total and soluble lead substrate requirements of ASTM F963, but remain, at this time, subject to soluble testing and limits for the other seven (7) heavy elements. ASTM subcommittee F15.22 has addressed this by developing clarifying amendments to be incorporated into a subsequent revision of the standard.	11/13/12

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4.3.6.2 8.4.1	Liquid-filled toys	With respect to liquid (water) filled toys, the ASTM F963 text in sections 4.3.6.2 and 8.4.1, referring to cosmetics, is a little confusing. In our experience, all toys or children's products containing, or filled with, liquid should always be tested to USP<51> and the ambiguity between sections 4.3.6.2, 4.3.6.3 and 8.3.2 should be clarified in the standard.	4.3.6.2 The formulations of these products used in toys shall be such that they are not subject to microbial degradation during shelf life or reasonably foreseeable use. 4.3.6.3 The cleanliness of these products used in toys and their ingredients shall be determined in accordance with 8.4.1. Formulations used to prevent microbial degradation shall be evaluated in accordance with 8.4.2. 4.3.6.4 Formulations of cosmetics shall be evaluated for potential microbiological degradation in accordance with 8.4.2. 8.4.2 *Preservative Effectiveness*—The formulations of cosmetics used in toys shall be evaluated for the potential microbiological degradation, or they shall be tested for microbial control and preservative effectiveness using the methods and limits in USP 24 <51> Antimicrobial Effectiveness Testing or the most current edition of the U.S. Pharmacopeia.	The salient wording is (emphasis added): 8.4.2 *Preservative Effectiveness*—The formulations of cosmetics used in toys shall be evaluated for the potential microbiological degradation, **or** they shall be tested for microbial control and preservative effectiveness using the methods and limits in USP 24 <51> Antimicrobial Effectiveness Testing **or** the most current edition of the U.S. Pharmacopeia. **This means that USP <51> (or other microbial challenge testing for that matter) may not be required in all cases.** Two examples: if such an evaluation for "potential microbiological degradation" determines that a powder possesses such low water activity that microbial growth is highly unlikely, or that a liquid is entirely non-aqueous and thus growth is likewise not probable. ASTM subcommittee F15.22 has addressed this by developing amendments to be incorporated into a subsequent revision of the standard.	8/28/12

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4.14.1	Cords, Straps and elastics in Toys	What is the interpretation of "cord"? What factors should be considered- Width? Hardness? Stuffed? In ASTM F963, "cord" is defined as "a length of slender, flexible material including monofilaments, woven and twisted cord, rope, plastic textile tapes, ribbon, and those fibrous materials commonly called string." "Strap" is defined as "a piece of flexible material in which the width is significantly greater than the thickness." How wide is a fabric strip that will not be defined as a cord? 20mm, or 30mm, or other? Will fabric strip laminated with foam not be defined as cord? Based on the requirement at in Section 4.14, can a strap be used -- even if the length is more than 12 inches in length? How does one interpret 'significantly greater' in the definition of "strap"?	3.1.18 *cord*—a length of slender, flexible material including monofilaments, woven and twisted cord, rope, plastic textile tapes, ribbon, and those fibrous materials commonly called string. 3.1.75 *strap*—a piece of flexible material in which the width is significantly greater than the thickness. 4.14.1 Cords, Straps, and Elastics in Toys—Cords or elastics included with or attached to toys intended for children less than 18 months of age (excluding pull toys, see 4.14.3) shall be less than 12 in. (300 mm) long when measured to the maximum length in a free state and under a load of 5 lb (2.25 kg). If cords/straps/elastics or multiple cords/straps/elastics can tangle or form a loop in connection with any part of the toy, including beads or other attachments on the ends of cords/straps/elastics, the loop shall not permit the passage of the head probe (Fig. 10) when tested in accordance with 8.22	1) **4.14.1 Does not apply to straps, but only to cords and elastics.** 2) **There is no definitive rule for when a cord is wide enough to be considered a strap -- the totality of the circumstances of each case must be evaluated.** With products within the scope of the standard under 4.14.1, there is a distinction between cords, elastics and straps. Cords and elastics included with or attached to toys intended for children less than 18 months of age (excluding pull toys, under 4.14.3) shall be less than 12 in. (300 mm) long when measured to the maximum length in a free state and under a load of 5 lb (2.25 kg). **This provision does not apply to straps**. Additionally, cords, straps, and elastics must satisfy two conditions for 4.14.1 to apply. They must be able to 1) tangle or form a loop in connection with any part of the toy, including beads or other attachments on the ends of them and 2)such loop shall not permit the passage of the head probe (Fig. 10) when tested in accordance with 8.22. Straps which are	3/27/14

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				rigid and wide generally do not tangle in such manner. Also for toys, when there is no anchorage at one end or capacity to loop onto itself, such conditions are unlikely to be met, since a loop is generally incapable of being created during reasonable use when no such characteristics are present. Such requirements were created to limit risks related to potential for ligature strangulation, a hazard which generally may not be evident with many unanchored straps when force is more evenly distributed over surface area of the neck. Another way of saying this is that straps are both less likely to tangle than cords, and if this occurs, the pressure on the neck is distributed over a larger area, minimizing the potential for injury. This has also been the case with many tails and arms on animal stuffed toy extremities. These requirements are based on real-world incident data.	

INTERPRETATIONS RELATED TO ASTM F963-11, *Standard Consumer Safety Specification on Toy Safety*

NOTE: Interpretations are subject to change. The Toy Safety Subcommittee that writes ASTM F963, in the normal course of business, reviews all interpretations to assess if a revision to the standard is warranted. An interpretation may or may not result in a change to the standard. All interpretations pertain to the current revision of ASTM F963.

Section	Keyword(s)	Request for Interpretation	Text from ASTM F963-11	Interpretation	Date of Interpretation
4.14.1.1	Cords, Straps and elastics Containing a Breakaway Feature	Is this section also applicable to children less than 18 months of age, as is 4.14.1? Or if there is breakaway feature regardless of age it must meet the 5 lb. force?	4.14.1.1 *Cords, Straps, and Elastics Containing a Breakaway Feature*—Cords, straps, and elastics on toys that have loops that admit the base of the head probe shall contain a functional breakaway feature that prevents entanglement by releasing at a force less than 5.0 lbf (22.2 N) when tested in accordance with 8.22.3. The free length of the individual released cord, strap, or elastic should not exceed a maximum length of 12 in. (300 mm). The breakaway feature shall be capable of being reattached without altering the characteristics of the attachment.	**Since 4.14.1.1 is a sub-clause of 4.14.1, and because the limit of 12" free length (once the breakaway feature has released) is retained in 4.14.1.1, the applicable age range is 0-18 months for both sections.**	3/5/14
4.15.5; 8.26	Overload: Child Seat	The item in question (image of product in use and packaging proof attached below) is marked with age grade "2+ years" but with no upper age bound; the package also indicates a maximum weight per seating position of 42 lbs., which corresponds (ASTM F963-11, Table 6) to a 95th-percentile three-year-old. The product is likely suitable for children up to five years of age (Table 6 mass 50 lbs.) based on its dimensions (older/larger children would have difficulty sitting in the designated seating positions).	8.26.2 The test load(s) shall be three times the weight indicated in Table 6 at the highest age of the age range for which the toy is intended. The test for overload requirements shall be conducted so that it will be consistent with the advertised weight capacity if that figure is higher than the minimum weight capacity in accordance with Table 6. When the highest age of the intended age range falls between two ages listed in Table 6, the higher of the two shall be chosen.	As there is no stated upper age limit, and the product is suitable and likely to be used by children up to five years of age, the appropriate test mass is 150 lbs (3X 50 lbs.) per seating position.	12/18/14

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		Since there is no stated maximum age for users, the product is suitable for children up to five years of age (which corresponds to a mass of 50 lbs. in Table 6), and the manufacturer's stated maximum weight is lower than this figure, what is the appropriate test weight in the overload test for this product? 	8.26.3 Where the toy is intended to bear the weight of more than one child at a time, test each sitting or standing area (3X the weight tested separately in each location).		
4.18.1	Accessible Clearances for Moveable Segments	The requirement at Section 4.18.1 is to address those movable segments "where the potential for pinching or crushing fingers or other appendages exists." There are practical examples where the clearance itself does not meet the dimensional requirement, but the potential for pinching or crushing fingers does not exist. One such example is provided in photos here.	3.1.2 *accessible*—(part or component) describing any area of the toy that can be contacted by any portion forward of the collar of the accessibility probe as described in 16 CFR 1500.48 and 16 CFR 1500.49. (See Fig. 1.) NOTE 1—Dimensions are provided in Fig. 1 for two probes corresponding to two age ranges of children. 4.18.1 *Accessible Clearances for Moveable*	**The existence of the condition outlined in the first sentence at Section 4.18.1 is a necessary prerequisite for application of the balance of the requirements, i.e. a reasonable potential for pinching or crushing of fingers or other extremities must exist for any part of the section to apply to a product.** One must consider this factor first; if it is judged that such a potential exists, one is	5/8/13

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		 The area between the wheel and body on the bottom of the 'car' in this example admits the 3/16" diameter rod but not the ½" diameter rod. This area is not accessible to a child when they are riding in the 'car' – they can't reach underneath and to the inside of the wheel which is the "accessible clearance of moveable segment" we are concerned with. When not in use, if child places 'car' upside down and spins the wheels, the area between wheel and car body is certainly accessible – but because the movement of the wheels in this position is strictly done by the user, the potential for pinching or crushing still does not seem to exist. In the past we have made this type of	*Segments*— This requirement concerns clearances between movable segments on toys intended for children under 96 months only, where the potential for pinching or crushing fingers or other appendages exists. It includes, but is not limited to, wheels and rigid-wheel wells, fenders, or the radial clearance between the wheels and chassis of ride-on toys, or the driven wheels and other parts of toys powered by electrical, spring, or inertial energy. If such accessible clearances admit a 3⁄16-in. (5-mm) diameter rod, they shall also admit a 1⁄2-in. (13-mm) diameter rod in order to prevent the trapping of fingers. *…section text continues in standard …*	to proceed in the following order: 1) determine whether the area of the product exhibiting a changing clearance is accessible (as defined in section 3.1.2); 2) if the area is accessible, apply the dimensional test using the 3/16"- and 1/2"-diameter cylindrical rods. This is the original intention of the requirement, and logic dictates this interpretation, as there are a number of situations in which an accessible changing clearance which does not meet the dimensional requirements can exist without creating any hazard (examples: a driven wheel with a clutch assembly or which is of such low energy that it ceases rotation immediately upon insertion of a finger; clearance where both elements are soft materials and deform to create minimal pressure on the extremity inserted, etc.). It is also possible for a clearance to be accessible as defined by Section 3.1.2, but to also be so located as to make insertion of an extremity very unlikely during the operation creating the changing clearance, as appears to be the case with the example product pictured.	

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		interpretation on similar products, that because the potential for pinching or crushing fingers does not exist, the item complies with section 4.18.1. With the ASTM F963 standard now essentially a Federal regulation, we want to confirm the interpretation of this section of the standard.			
4.19 And 3.1.69	Simulated Protective Device, hats, helmets, goggles, costumes	For costumes that attempt to mimic real-life protective headgear or other devices (e.g., a firefighter costume or a construction worker costume that comes with play headgear and are made of other materials such as soft vinyl) -- would the headgear be considered a simulated protective device and subject to the requirements of ASTM F963 section 4.19? We do agree that if the hats are made with hard plastic, then a simulative protective device label should be labeled on the product and package. However, since these hats are made of soft vinyl material, it appears obvious that (the user would understand) the items are not intended nor will they provide any protection, however. As such, under ASTM F963 Section 4.19, do they still require the simulated protective device	4.19 *Simulated Protective Devices (such as helmets, hats, and goggles)*—These requirements are intended to minimize hazards that might be caused, for example, by goggles or space helmets if the material from which they are constructed fails; or by toys that simulate protective devices such as football helmets and pads, if the wearer uses the article as a real protective device rather than as a toy. The toy shall conform to the requirements listed in 4.19.1 and 4.19.2 after testing in accordance with 8.7.4 and 8.8 through 8.10. 4.19.1 *Eye Protection*—All rigid toys that cover the face, such as goggles, space helmets, or face shields, shall be constructed of impact-resistant material that will not have sharp edges, sharp points, or loose parts that could enter the eye before or after being tested in accordance with 8.5-	**A cloth or PVC soft hat (that just happens to be intended as suggestive of a firefighter/construction worker/police or other helmet) does not meet the requirement of 4.19.2 as the item should be substantially simulative of a real protective device in order to trigger the labeling requirement. In other words, this is a hat, not a helmet.** The definition of *simulated protective equipment* is at 3.1.69, and is as follows: "toys designed to mimic products that infer some sort of physical protection to the wearer (for example, protective helmets and visors)". The intent here is that if an item is sufficiently suggestive of the real protective device that an ordinary consumer might believe that some level of protection is conferred, then a label is required; if protection would not be	12/11/13

Section	Keyword(s)	Request for Interpretation	Text from ASTM F963-11	Interpretation	Date of Interpretation
		warning?	8.10. This applies to items with cutout eye holes as well as items that cover the eyes. 4.19.2 Toys that simulate safety protective devices (examples include, but are not limited to, construction helmets and sports helmets) and their packages shall be labeled clearly in accordance with 5.9 to warn the purchaser that they are not safety protective devices. *…section text continues in standard …*	inferred, then no label is required.	
4.21.1.5 4.21 3.1.59	Projectiles Stored energy Toy gun	Can you provide some additional clarity as to the definition of "stored energy." A 'flywheel' is a device used to store rotational kinetic energy – i.e. stored energy. However, in an example of a toy gun that shoots foam "bullets" and utilizes flywheels which have to be cranked up by the child user and in order to 'store' the energy -- and the amount of stored energy depends upon how much effort the user puts into pumping the handle -- the energy stored will vary depending upon the amount of effort put into winding the flywheels by the user and the flywheel speed will decrease over time, absent additional user input.	4.21.1 These requirements apply to toys that are intended to launch projectiles into free flight by means of a discharge mechanism in which the kinetic energy of the projectile is determined by the toy and not by the user. 4.21.1.5 The aforementioned requirements shall not apply to any discharge mechanism incapable of storing energy independent of the user, or intended to propel a ground-based vehicular toy along a track or other surface, or when the projectile is inaccessible to a child when it leaves the discharge mechanism, for example, bagatelle or pinball machines. See also 4.21	The energy imparted to the launched projectile is determined by the device and not the user -- making the example provided a stored energy discharge mechanism. Once the child has accelerated the flywheels to operating speed by pulling on the handle, the discharge mechanism stores inertial energy. This is analogous to the stored potential energy in a spring-powered device, which requires an initial action by the user to cock it, but then imparts energy to the projectile independent of the user. The major difference here is that in contrast to a spring imparting a fixed force	6/4/12

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		Should this type of mechanism be classified as a stored energy discharge mechanism or not, when the amount of energy is determined by the child user? (Additional detail about this example: a number of foam 'bullets' can be loaded into a clip-on magazine that allows each to drop into the 'chamber' and the front handle can be 'pumped' continuously to maintain the speed of the flywheels.)	*…section text continues in standard …*	(i.e. obeying Hooke's law), the projectile energy will vary based on the angular velocity decay characteristics of the flywheels, but this variance is substantially independent of the user. The distinction between devices which store energy independent of the user and those which do not was originally recognized for two separate and distinct reasons: 1) Measurement of kinetic energy cannot be accomplished with any consistency when the energy is fully dependent on the user and not the device; and 2) Devices which store energy are more likely to be associated with an unintended or "surprise" discharge than are toys for which the user must make a conscious decision to directly impart energy to a projectile. While it may seem that consistent measurement of kinetic energy would be difficult with this device, energy is not entirely (or even mostly) user-dependent as it is with, for example, a bow-and-arrow set. The same factor which keeps	

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				the flywheels in motion once they are spinning, namely inertia, *also* resists the effort to commence them spinning. The energy which can be imparted to the flywheels has an upper practical limit so that the flywheel energy (and thus the projectile energy) will be reasonably consistent when the user exerts maximum effort to spin the flywheels. In this manner, reasonable test consistency can be achieved. More importantly, once the flywheels are spinning, the only factor which acts on their energy is slow decay due to friction. Thus, projectile energy is independent of the user *and* an unintended or surprise discharge is possible.	
4.23.1 A 10.7	Stuffed Toy with rigid components inside	There appears to be differing requirements in the ASTM and EN toy standards for stuffed toys with rigid internal components. Consider the example of a stuffed toy with rigid armature inside running from the back of the head to the feet like a backbone (approx 14 inches/38cm), but not inside the arms. Even with the armature, the toy is considered to be soft and cuddly and, therefore, suitable for all	**ASTM F963-11; 4.23 *Rattles*—**Infant rattles shall conform to the safety requirements as specified in 16 CFR 1510. Illustrations of a rattle test fixture are shown in Fig. 15. 4.23.1 In addition to meeting the requirements of 16 CFR 1510, rigid rattles incorporating nearly spherical, hemispherical, or circular flared ends shall be designed so that such ends are not capable of entering and penetrating to the full depth of the cavity in the supplemental	**A stuffed toy (such as described in the example) does not fall within the scope of the requirements of ASTM F963-11, sections 4.22, 4.23, 4.24, or 4.32 because it is not a rattle, squeeze toy, or teether -- nor does it exhibit a flared, spherical, or domed end -- as defined in the four listed F963 sections.** Further, while the purpose of this Interpretation document is to interpret ASTM F963 only, it is our opinion that a	8/28/12

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		ages from a testing point of view. Although the toy is not a rattle, teether or squeeze toy, I believe the following references are relevant (ASTM F963 Sections 4.22, 4.23, 4.24, 4.32). The current version of ASTM F963-11 specifically describes 'rigid components…contained within soft filled rattles' in section 4.23.2 as an exclusion. EN71-1, clause 5.8 apparently does not include 'rigid elements' that are contained within soft toys and only excludes rigid elements that are *not* contained within soft filled toys. This is further complicated by the fact that the rationale in ASTM F963-11 Annex A10.7 includes "a stuffed toy" that contains an "internal rigid component" and states that the change to the ASTM F963 harmonizes with EN71-1 clause 5.8, which we believe it does not. Strictly according to the definition stated in EN71-1 clause 5.8 for rigid elements *not* including those that are contained within soft filled toys, it would seem that this soft filled toy under discussion, although it contains a rigid component longer than 30	test fixture illustrated in Fig. 16. A rattle shall meet this requirement when tested under the force only of its own weight and in a noncompressed state. These requirements are applicable before and after use and abuse testing in accordance with Section 8. 4.23.2 *Exclusion*—The requirements of 4.23 and 4.23.1 shall not apply to the following: *(1)* Soft-filled (stuffed) rattles or soft-filled parts or parts of fabric. *(2)* Rigid components having a major dimension equal to or less than 1.2 in. (30 mm) contained within soft-filled rattles. **EN71-1; 5.8 Shape and size of certain toys (see A.31)** The requirements in 5.8 a) and b) do not apply to *soft-filled* parts of a toy or parts of fabric. They do not apply to rigid elements having a major dimension equal to 30 mm or less. b) For such toys with nearly spherical, hemispherical or circular flared ends having a mass of 0.5 kg or less, no part of the toy shall protrude past the base of template B when tested according to 8.16 (geometric shape of certain toys).	stuffed toy such as described does not fall within the scope of EN71-1:2005 Clause 5.8.) EN71-1 clause 5.8 lists a number of types of toys which are within its scope (although the list provides examples and is not all-inclusive); soft stuffed or plush toys are not listed and are in fact categorically excluded, thus the item is outside the scope of this clause. The two standards (ASTM F963 and EN-71) are substantially aligned with regard to requirements for rigid elements contained within soft-stuffed toys which are within scope of the relevant sections. **The first test for both standards is to ask "is the product a rattle, teether, squeeze toy, or a toy for under 18 months of age with a flared, spherical, or domed end?" If the answer is no, no further test is required.** If the product under test does fall into one of these categories, toys and components entirely of soft stuffed material or fabric are exempted, as are rigid elements (whether contained within a soft stuffed component or not) which exhibit a major dimension equal to or less than 30mm.	

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		mm, is excluded from EN71-1; 5.8; under ASTM F963-11, A10.7 the toy would have to comply with gauge requirements.			
4.36	Hemispheric Shaped objects	This question relates to a flared edge on items that may fall under the requirements for "hemispheric shaped objects". Would the horn end of a toy (an example is pictured) The shape of the horn end has some similarities to that of a cup which has a lip that curls outward. It would seem that the curve of a toy trumpet would be such that it would not be likely to support a seal sufficient to create a vacuum, but the similarities are close to that of a cup with a curled end that it warrants an interpretation. (Note the example pictured has the inner "tube" of the horn portion blocked off.) 	4.36 *Hemispheric-Shaped Objects*—These requirements apply to toy cup-, bowl-, or one-half egg-shaped objects having a nearly round, oval, or elliptical opening with the minor and major inner dimensions between 2.5 in. (64 mm) and 4.0 in. (102 mm), a volume of less than 6.0 oz (177 mL), a depth greater than 0.5 in. (13 mm), and intended for children under 3 years of age. The following are exempt from this requirement: 4.36.4 Non-detachable (as determined by testing in accordance with 8.6-8.10 of this specification) components of larger products (for example, bowl-shaped smoke stack that is permanently attached to a toy train or a swimming pool that is molded into a larger toy playscape). *…section text continues in standard …*	**ASTM F963 Section 4.36 applies to** "toy cup, bowl, or one-half egg-shaped object" as described in the standard. For this reason, examples such as described would be outside the scope of the requirement. Additionally, a second factor in this interpretation is that the flared end of the toy appears not to be detachable from the rest of the item, and therefore even if the item were in scope, it would qualify for the exemption in section 4.36.4.	4/15/13

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4.39	Jaw Entrapment	Questions have come up amongst testing labs regarding the jaw entrapment requirements found in section 4.39 of F963. The questions that have arisen are twofold: 1. What is the definition of "handles" as it pertains to this requirement – is it a structure that extends out from the product (as indicated in figure 25 in F963) that can be used to lift or move the product, or is it any feature of the product that can be used to move / lift it etc.? Example: a slot along the side of the product such as you might find on an apple crate:	4.39 *Jaw Entrapment in Handles and Steering Wheels*: 4.39.1 These requirements are intended to address potential jaw entrapment in handles and steering wheels that are located such that they are accessible for teething in the following categories of toys intended for children under 18 months of age: activity tables intended to be played with by a standing child, large bulky toys, stationary floor toys, push toys intended to be pushed by a child walking upright, and ride-on toys. 4.39.2 Handles that are connected to the toy with a hinge and handles made from a pliable material (for example, straps and ropes) are exempt from this requirement. 4.39.3 Openings in handles and steering wheels that allow a 0.75 by 0.75 by 1 in. (1.9 by 1.9 cm by 2.5 cm) test fixture to pass completely through must also allow a 1.5 by	**The intention of the standard is to apply only to handles, not any slot in a product.** This decision is based on the incident data, and trying to match the scope of the requirement only to those areas that would be likely to cause a problem. There was much discussion in the task group about the scope – some of this is mentioned in the rationale. The work group did discuss describing what could fit in a child's mouth. The group also discussed what dimensions might describe a handle, based on the dimensions of a child's hand. In the end it was agreed that the term "handle" was sufficient, and that "accessible for teething" adequately described the areas of concern. In the pictured crate example, the handle cutouts are to be tested for jaw entrapment, but the full-length slots	5/29/13

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		 2. What constitutes "accessible for teething" in this regard? Clearly a slot in a solid material with several inches on all sides would be inaccessible for teething, but this is not defined in the standard leading some labs to conclude that ALL slots that pass the small probe must also pass the large probe which was not likely the intention of this requirement. Could an interpretation be made to resolve the above questions? A solution might be to add a definition for "handles" to the standard and some clearer language to section 4.39.1 to define "accessibility for teething" according to the original intent?	2.5 by 1 in. (3.8 by 6.35 by 2.5 cm) test fixture to pass completely through (see Fig. 25). Test fixtures can be made of any rigid material. The test fixture shall be oriented such that the 0.75-in. (1.9-cm) dimension and the 2.5-in. (6.35-cm) dimension is parallel with the major dimension of the handle or steering wheel opening. *…section text continues in standard …*	beteween slats on the box sides would not be tested. A product feature must be intended for use as a handle to be subject to section 4.39 of the standard.	

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5.3.1 5.11.1.3	Warning Labels	ASTM F963 Section 5.3.1 is in direct conflict with the letter sizes prescribed in the table included in Section 5.11.1.3, which, based on the area of the principle display panel (PDP), allows the signal word letters to be as small as 3/64. inch The identical table appears in both 16 CFR 1500.19 and 1500.121 but in neither of these CFRs am I able to find any specification with regard to a minimum signal word letter size of 1/8. inch One could argue that, since the ASTM F963 has become a mandatory standard under the CPSIA, the minimum 1/8 in. height for the signal word lettering should take precedence. However, if this is the case, logically, the table columns covering PDP areas from 0 up to 15 in^2, specifying signal word heights less than 1/8 in. should be deleted from the table in ASTM F963.	5.3 *Safety Labeling Requirements*—Certain toys, and in some cases their packages, are required to carry safety labeling to comply with this specification. 5.3.1 Required safety labeling shall consist of an alert symbol (an exclamation mark within an equilateral triangle), a signal word (CAUTION or WARNING), and text that describes the hazard that is present. Additionally, safety labeling may contain text about what to do or not to do to avoid injury (for example, "Keep out of baby's reach"). **The signal word shall be in all upper case sans serif letters not less than 1⁄8 in. (3.2 mm) in height and shall be center or left aligned.** The alert symbol shall directly precede the signal word. The height of the triangle shall be at least the same height as the signal word. The height of the exclamation point shall be at least half the height of the triangle and be centered vertically in the triangle. Text describing the hazard(s) and hazard avoidance behavior(s) shall appear in sans serif lettering and shall be either left aligned or center justified. Capital letters shall be no less than 1⁄16 in. (1.6 mm). Recognizing space constraints, it is recommended, that where possible, such	**The statements are not in conflict with each other. The minimum type size requirements of 5.3.1 apply to all safety warnings required by F963 with the exception of those in 5.11, which must adhere to the minimum heights specified in 5.11.1.** Section 5.3.1 specifies generally the minimum letter heights for safety warnings required under F963. Section 5.11 reiterates the requirements passed by Congress as part of the Child Safety Protection Act and codified by regulation at 16CFR 1500.19 (a specific set of warnings required for as-received small parts, small balls, marbles, and balloons). The requirements of 16CFR 1500.19 include that the warning statement be set off from other copy by placement inside a rectangular area (typically a box around the warning is used, although not required), and thus a slightly smaller type size is arguably justifiable. It is also not desirable for F963 to be in direct conflict with statute and regulation, as this would create confusion. Of course, both 5.3.1 and 5.11.1.3 specify	8/28/12

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			text begin on the next line below the signal word, and that a new line be used for each subsequent statement or separate thought. 5.11 *Small Objects, Small Balls, Marbles, and Balloons* 5.11.1.3 All labeling statements required by 5.11 shall comply with the following type size requirements based on the computed area of the principal display panel. For these purposes, Signal Word means the word "Warning" and the words "Safety Warning"; Statement of Hazard means "Choking Hazard"; Other Material means all other remaining statements. (See table in text)	only minimum type heights, and a manufacturer is free to exceed these measurements by any amount deemed appropriate.	

INTERPRETATIONS RELATED TO ASTM F963-11, *Standard Consumer Safety Specification on Toy Safety*

NOTE: Interpretations are subject to change. The Toy Safety Subcommittee that writes ASTM F963, in the normal course of business, reviews all interpretations to assess if a revision to the standard is warranted. An interpretation may or may not result in a change to the standard. All interpretations pertain to the current revision of ASTM F963.

Section	Keyword(s)	Request for Interpretation	Text from ASTM F963-11	Interpretation	Date of Interpretation
6.3.2	Mobiles	Some mobiles are not designed to be mounted on a wall or the ceiling. Section 6.3.2 stipulates information to be included in the instructions to the user including the following language directing the consumer... *"… If so designed, mount on wall or ceiling clearly out of a standing baby's reach."* For a mobile that is not designed to be mounted on a wall or ceiling, it would be misleading and/or confusing to include this language. Is this language optional? When testing with some major toy retailer>-selected labs, they tend to issue a failure when statements from ASTM standards are not included. Is it correct to include the highlighted statement to be in compliance with ASTM F963-11 but also add a statement letting the end consumer know that our mobiles must not be mounted on wall or ceiling since they are not designed to?	6.3 Mobiles—Mobiles intended to be mounted on a crib, playpen, or wall or ceiling nearby shall be provided with instructions for proper assembly, installation, and use to insure that the product does not present an entanglement hazard. The instructions shall include at least the following information: 6.3.1 A crib mobile is intended for visual stimulation and is not intended to be grasped by the child. 6.3.2 If attached to the crib or playpen, remove when baby begins to push up on hands and knees. If so designed, mount on wall or ceiling clearly out of a standing baby's reach. 6.3.3 If mounted on a wall or ceiling, install the mobile clearly out of a standing baby's reach.	**If not applicable based on the design of the product, non-relevant language may be omitted from the instruction manual and the manual will still be in compliance.** The highlighted wording only applies to products "if so designed" and intended by the manufacturer to be wall or ceiling mounted. It is not applicable to crib mobiles (which are not intended by the manufacturer to be ceiling or wall mounted).	5/23/12
8.3.3	Component part testing for lead and heavy	CPSIA accepts component testing, which means a supplier can provide raw material for test of total lead and phthalate. Is component testing allowed for ASTM F963	8.3.3 *Preparation of Test Samples*—A laboratory sample for testing shall consist of a toy in the form in which it is marketed, excluding the package and packaging	It has always been the intention that F963 compliance can be established by component testing and certification, to the extent that component testing and	9/9/13

Section	Keyword(s)	Request for Interpretation	Text from ASTM F963-11	Interpretation	Date of Interpretation
	metals	total lead, soluble heavy metals and total heavy metal screening under ASTM F963-11?	components. 8.3.3.1 The test sample shall be taken from the accessible portions of a single toy sample. 8.3.3.2 Identical materials in the sample may be combined and treated as a single sample. A single sample may not consist of more than one material or color (that is, composite testing is not allowed). **8.3.3.3 The test sample can alternatively be taken from materials in a form such that they are representative of the relevant material specified above.** 8.3.3.4 When a toy is intended to be taken apart or can be taken apart without the use of tools, each piece shall be considered separately. 8.3.3.5 For reference purposes, the sample may be taken from the raw material rather than scraped from the sample. *…section text continues in standard …*	certification is allowed by CPSC for total lead in substrates and coatings (F963 does not currently contain a phthalate requirement, except for the 3% DEHP limit in rattles, pacifiers, and teethers in section 4.3.8). In fact, rather than relying on section 8.3.3.3 of F963, the CPSC has already explicitly allowed this, as 16CFR 1109 (the component part testing and certification rule) scope (at 16CFR 1009.1(a)) covers all "tests or certifications of the following ["the following" includes "component parts of consumer products"] when such testing or certification is used to support a certificate of compliance pursuant to section 14(a) of the Consumer Product Safety Act (CPSA) or to meet continued testing requirements pursuant to section 14(i) of the CPSA". Since F963 testing and certification is required pursuant to section 14 of the CPSA, 16CFR 1109 applies. **So long as a degree of assurance which is comparable to that required by 16CFR 1109 is achieved, compliance with the heavy element requirements of ASTM F963 may be established through testing**	

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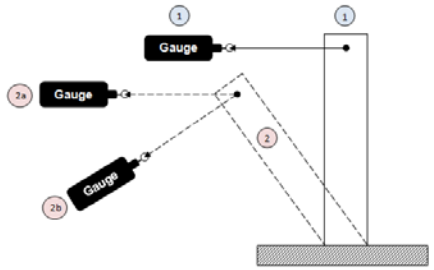
				of raw materials and/or component parts.	
8.3.5.4	Stickers	The standard exempts paper and therefore there is no test preparation method written for paper. The coatings on the paper sticker are usually impregnated into the paper and not considered a surface coating. When testing stickers to EN71:3, the product is tested as a whole (ink, paper and adhesive). As written ASTM F963-11 doesn't appear to address such a product. Should it be considered paper and as a whole exempt from testing? If not, should it be tested as a polymeric material, which would be similar to the EN71:3 paper method?	Section 8.3.5.4 Polymeric and similar materials including laminates, whether reinforced textile or not, but excluding other textiles. *…section text continues in standard …*	**Stickers with a paper substrate and no laminate coating (i.e. those that consist solely of paper and ink, along with any varnish or topcoat which is absorbed and becomes part of the paper substrate, and is not a plastic film) and adhesive are exempt under the paper exemption.** **Stickers which are printed on a plastic substrate or have a laminated plastic coating are to be tested as a polymeric material per section 8.3.5.4.** If the other surface coating is scrapeable, it is tested as a surface coating but the underlying paper substrate is exempt. Pressure-sensitive adhesive (either standard or low-tack as in "Post-it"-type applications) is not a surface coating as defined [see 16CFR 1303.2(b)(1)] in that it does not dry to a solid film, but instead exists as a viscous liquid (primarily on the surface of the substrate, but also becoming inseparable from it due to "wicking" by capillary action if the substrate is porous). It is also not likely to	8/28/12

Section	Keyword(s)	Request for Interpretation	Text from ASTM F963-11	Interpretation	Date of Interpretation
				contain appreciable amounts of any of the proscribed heavy elements. ASTM subcommittee F15.22 has addressed this question by developing clarifying amendments to be incorporated into a subsequent revision of the standard.	
8.3.5.4	Printed Textiles	Are all printed textiles (those with a design that cannot be removed as a coating either by scraping or washing with a solvent) exempt from testing? If not, should they be tested to the polymeric material section, as it would be similar to how the material would be tested under EN71:3?	Section 8.3.5.4 Polymeric and similar materials including laminates, whether reinforced textile or not, but excluding other textiles. *…section text continues in standard …*	**Where the printed matter cannot be easily separated (e.g. mass-dyed polymeric fibers, fiber-reactive prints on cellulosic fabrics, discharge printing of either mass or reactive dyed fabric), the entire material should be tested <u>as a single unit</u> per section 8.3.5.4.** Printed textiles where the printing can be easily separated (e.g. pigment prints, screen inks, etc.) should have the printed matter removed and tested separately as a surface coating, and the remaining textile substrate tested per section 8.3.5.4. ASTM subcommittee F15.22 has addressed this by developing clarifying amendments to be incorporated into a subsequent revision of the standard.	8/28/12

Section	Keyword(s)	Request for Interpretation	Text from ASTM F963-11	Interpretation	Date of Interpretation
8.9	Torque and tension test	Some components bend when a force is applied perpendicular to the major axis of the test component, as specified in section 8.9. For such cases: a) Is the force maintained parallel to the plane of application, as in case (2a) in the figure below? b) Or is the force maintained perpendicular to the component as it bends, as in (2b) in the figure below? c) If the force is maintained as in (2b), what practice should be followed when a component bends significantly such that the specified force can no longer be maintained? 	8.9 *Tension Test for Removal of Components*—Any projection of a toy that a child can grasp with at least the thumb and forefinger or the teeth shall be subjected to this test. The tension test shall be performed on the same components of the toy subjected to the torque test described in 8.8. The amount of force used shall be determined from Table 5, according to the age group for which the toy is intended. A clamp capable of applying a tension load to the test component shall be applied in a manner that will not affect the structural integrity of the attachment between the component and the toy. The loading device shall be a self-indicating gauge or other appropriate means having an accuracy of 60.5 lb (62 N). With the test sample fastened in a convenient position, an appropriate clamp shall be attached to the test object or component. The required tensile force shall be applied evenly, within a period of 5 s, parallel to the major axis of the test component, and maintained for an additional 10 s. The tension clamp shall then be removed, and a second clamp suitable for applying a tension load perpendicularly to the major axis of the test component shall	Torque and tension are applied to the same component, in this order: 1) Clockwise torque to torque limit or 180 degrees rotation, whichever occurs first; 2) Allow to return to relaxed state; 3) Counterclockwise torque to torque limit or 180 degrees rotation, whichever occurs first; 4) Allow to return to relaxed state; 5) Tension parallel to major axis of component to tension force limit; 6) Allow to return to relaxed state; 7) Tension perpendicular to major axis, keeping the force vector perpendicular to the original orientation of the component, to tension force limit, allowing the component to bend up to 90 degrees from its original position. This is option "2a" depicted. The gauge must not be fixed in height so that the direction of pull is oblique to the original direction, as is depicted in "2c" above. **Neither method "2b" nor "2c" is acceptable**. The 2010 CPSC Engineering Test Manual	12/21/15

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		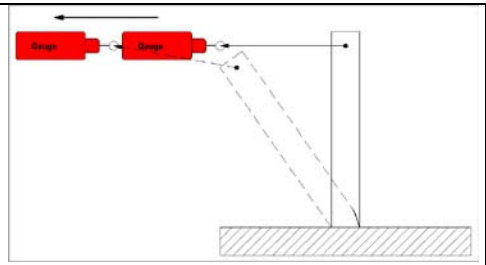 Method 2c	be attached to the test object component. The required tensile force shall be applied evenly, within a period of 5 s, perpendicularly to the major axis of the test component and maintained for an additional 10 s.	specifies the 90 degree limit on perpendicular tension.	
8.24	Magnet Use and Abuse Testing	Is use and abuse testing required for products with magnets intended for children over 8 years of age?	8.24.4 *Magnet Use and Abuse Testing*—Each unique component shall be tested per this section. A new toy shall be used that has not been subjected to other use and abuse testing. All the testing in this section must be performed in series on each unique component (that is, testing must follow 8.24.4.1-8.24.4.5 in sequential order). 8.6 *Abuse Testing*—The tests described in 8.7-8.13 are to simulate the exposure of a toy to mechanical damage through dropping, throwing, and other actions likely to be performed by a child, which are characterized as reasonably foreseeable abuse. After testing, the toy shall be examined for mechanical hazards, such as hazardous sharp edges and points, and ingestion hazards, such as small liberated	**Section 8.24.4 is to be interpreted to require application of use-and-abuse testing to toys with magnets intended for children over 8 years of age**, applying the 37-96 month abuse testing parameters up to age 14. The standard will be updated to clarify that this is the intent of the section.	6/23/15

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			components, chips, or fragments. The severity of the abuse tests described in 8.7, 8.8, 8.9, 8.10, and 8.12 shall be determined according to the age group for which the toy is intended. If the toy is intended for an age group that spans more than one age group according to Table 5, the toy shall be subjected to the most severe test. Unless otherwise specified, none of the abuse testing described in 8.7-8.12 applies to toys intended for children over 96 months of age. Toys reasonably intended to be assembled by an adult, and not intended to be taken apart by a child, shall be tested only in the assembled state if the shelf package and assembly instructions indicate prominently that the article is to be assembled by an adult. Individual parts of toys that are intended to be assembled by children shall be tested as well as the fully assembled toy; however, the assembled toy shall be made of components that have not been subjected to the abuse testing.		