



**Toy Industry** Association, Inc.

# Update on Changes to ASTM F963 - The U.S. Toy Safety Standard

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**Toy Safety Compliance Update**

**New York City | February 12, 2013**

# ASTM F963-11 Status

- Published by ASTM December 2011
- Endorsed by CPSC by unanimous vote March 2012
- Became mandatory rule June 2012
- Third-party testing and certification required for products within scope of the standard

# Changes to F963 ... Slide 1 of 3

- Heavy elements-addition of substrate requirements and compositing procedure
- Addition of design guidelines for bath toy projections
- Toys with spherical/nearly spherical ends-clarifies requirement by adding additional examples and illustrations

# Changes to F963 ... Slide 2 of 3

- Plastic film-clarifies that this requirement applies to all film, not just packaging
- Rattles/Teethers/Squeeze toys-adds exemption for soft-filled items
- Jaw Entrapment-gauge modified to add third dimension

# Changes to F963 ... Slide 3 of 3

- Stability/overload of ride-on toys and seats-clarifies test method
- Yo-Yo balls-clarifies test method
- Acoustics-simplifies and clarifies test method

# F963-11 Heavy Elements ...Slide 1 of 5

- Updated to add CPSIA lead limits-90ppm for surface coatings/100ppm for substrates
- Extends soluble element limitations to substrates (previously applied only to surface coatings)
- Adds option of total screen to demonstrate compliance with soluble limits
- Adds test methods for substrate testing

# F963-11 Heavy Elements ...Slide 2 of 5

- Adds 24-hour cadmium migration test for metallic small parts; 200ug maximum extraction limit
- Adds compositing procedure-compositing up to three samples explicitly allowed for total element testing
- With the above changes, F963-11 now contains the most comprehensive toy heavy element standard worldwide
- Standard is now essentially aligned with both EN71 and ISO 8124, except that F963-11 contains the additional CPSIA total lead and 24-hour cadmium requirements

# F963-11 Heavy Elements ...Slide 3 of 5

## Maximum Soluble Migrated Element in ppm (mg/kg) for Surface Coatings and Substrates Other Than Modeling Clay Included as Part of a Toy

Antimony	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium
(Sb)	(As)	(Ba)	(Cd)	(Cr)	(Pb)	(Hg)	(Se)
60	25	1000	75	60	90	60	500

## Maximum Soluble Migrated Element in ppm (mg/kg) for Modeling Clays Included as Part of a Toy

Antimony	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium
(Sb)	(As)	(Ba)	(Cd)	(Cr)	(Pb)	(Hg)	(Se)
60	25	250	50	25	90	25	500



# F963-11 Heavy Elements ...Slide 4 of 5

- Paper and paperboard not tested; fabrics and other material exempted by 16CFR 1500.87 and 16CFR 1500.91 also exempt from F963 total and soluble lead in substrate requirements
- Compositing not allowed for soluble element testing

# F963-11 Heavy Elements ...Slide 5 of 5

- Surface coating limitations generally apply up to age 14 years; substrate requirements generally apply to accessible components of items for six years of age and under unless they cannot be mouthed, licked, or sucked; also to accessible components of products for ages up to 14 years intended to be mouthed, contact or store food or drink, toy writing instruments, play cosmetics, or products otherwise likely to be mouthed

# Common Questions regarding ASTM F963-11

## Are fabrics exempt from substrate heavy metals requirements?

- At this time, they are only exempt from total and soluble lead; they are subject to soluble testing for the seven listed elements other than lead. Scrapeable fabric prints are subject to testing for total lead and eight-element soluble requirements, however.

# Common Questions regarding ASTM F963-11

**If I perform the total screen test for heavy elements on a metallic small part, and total cadmium is below the soluble limit (75ppm), do I need to also perform the special 24-hour cadmium extraction test?**

- No, the item can be considered compliant without additional heavy elements testing

# Common Questions regarding ASTM F963-11

**I know paint is not considered a barrier with regard to substrate total lead requirements; is it a barrier with regard to ASTM F963 substrate testing for the other seven elements?**

- No, paint is not considered a barrier to accessibility of any of the eight listed heavy metals which may be present in the underlying substrate.

# Common Questions regarding ASTM F963-11

- **If I have a test report showing compliance with EN71-3, does this mean I am also compliant with ASTM F963-11?**
  - Not quite. ASTM F963-11 heavy elements requirements are essentially identical to those in the current version of EN71-3, except that ASTM F963 requires the additional total lead test and the 24-hour special cadmium extraction test for metallic small parts. If you have a report indicating compliance with ASTM F963-11, the product is in general also compliant with EN71-3 for heavy elements unless it contains paper.

# What's Next for F963?

- **Magnets:** working in parallel to align minor discrepancies with ISO 8124-1
- **Projectiles:** working in parallel to align requirements with ISO 8124
- **Microbiological Safety:** Clarification of requirements; possible replacement or supplementation of USP tests with CTFA
- **Coin/button cell batteries:** possible additional labeling
- **Acoustics:** several technical and alignment issues under consideration
- **Cords and Elastics:** remaining technical issue
- **Expanding Toys-**requirements under consideration
- **Tablets/smart phones used with toys-** any notable incidents?
- **Children's Storage Units**

# Thank You

- **Thank you for your kind attention**

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