The webinar will be begin shortly.

UV & EB Compliance with Federal Consumer Product Safety Standards
Moderator

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Speakers

U.S. Consumer Products Safety Commission

Mary Toro
Director Regulatory Enforcement

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Small Business Ombudsman

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Team Lead Regulated Chemicals
OVERVIEW OF CHEMICAL, HAZARDOUS SUBSTANCE & OTHER PRODUCT SAFETY REQUIREMENTS

RadTech Webinar
October 7, 2014

Views expressed in this presentation are those of the staff and do not necessarily represent the views of the Commission.
Agenda

• Intro to CPSC
• Consumer Products Safety Act (CPSA) & Federal Hazardous Substances Act (FHSA)
• What is a Children’s Product?
• Consumer Product Safety Improvement Act (CPSIA) of 2008
  ✓ Key Substantive Requirements
    ✓ Chemical content – lead, lead in paint, phthalates
  ✓ Key Procedural Requirements
    ✓ Third Party Testing; labeling requirements
• Independent, federal regulatory agency; established in 1973.

• Mission is to reduce unreasonable risks of injury from consumer products.

• Jurisdiction includes thousands of different types of products sold to consumers for personal use in or around the household or school and in recreation.

• Five Commissioners, appointed by the President and confirmed by the Senate
Consumer Product Safety Act (CPSA)

- Manufacturers and importers of children’s products must third party test (CPSC-accepted laboratory) and certify to demonstrate that their products comply with the Act and applicable regulations.

- Manufacturers and importers of non-children’s products must test and certify to demonstrate that their products comply with the Act and applicable regulations.

- Industry mandatory self-reporting through Section 15.

- Establishes prohibited acts and includes civil and criminal penalties for violations.
Federal Hazardous Substances Act (FHSA)

• Requires precautionary labeling on the immediate container of hazardous household substances to help consumers safely store and use those products and to give them information about immediate first aid steps to take if an accident happens.

• Bans certain products that are so dangerous or the nature of the hazard is such that the labeling the Act requires is not adequate to protect consumers.

• Bans toys and or article intended for use by children that is, or bears, or contains a hazardous substance in such manner as to be susceptible of access by a child to whom the toy is entrusted.
KEY POWERS AVAILABLE TO CPSC

• Order a manufacturer to cease distribution, recondition/repair, replace, or refund the price of a product
• Refuse admission of non-compliant products; seize and destroy product at the port of entry with Customs & Border Protection (CBP)
• Issue public communications and warnings re: a product and a recall/corrective action plan
• Investigate for civil and criminal penalties for prohibited acts, including failure to report in a timely and adequate manner & other violations
• Injunctive relief
• Above can be via court or administrative proceedings or voluntary, in cooperation with the manufacturer.
“Children’s products” are those products designed or intended primarily for children 12 years old and younger – children’s toys are included.
What is a Children’s Product?

• The following 4 factors will be considered:

  • A statement by the manufacturer about the intended use of the product, including a label on the product, if such statement is reasonable.
  
  • Whether the product is represented in its packaging, display, promotion, or advertising as appropriate for use by children 12 years of age or younger.
  
  • Whether the product is commonly recognized by consumers as being intended for use by a child 12 years of age or younger.
  
  • The Age Determination Guidelines (pdf) issued by the Commission staff in September 2002, and any successor to such guidelines.
Lead and Children

• Lead is a cumulative toxic heavy metal which, in humans, exerts its effects on the renal, hematopoietic, and nervous systems.

• There appear to be three stages to childhood lead poisoning.
  – (1) Adverse health effects in the first stage are not clinically present but metabolic changes can be observed.
  – (2) Loss of appetite, vomiting, apathy, drowsiness, and inability to coordinate voluntary muscle movements.
  – (3) Hyperactivity, impulsive behavior, prolonged reaction time, perceptual disorders and slowed learning ability.
• **Surface Coatings:** Lead is limited to a maximum of 90 parts per million (ppm) in paint and other surface coatings in children’s products and other products.

• **Substrates:** Lead is limited to a maximum of 100 ppm in the substrates of all children’s products.

• **Note** → Each lead requirement is distinct, with its own definitions and test methods.
• **2007 was the ‘Year of The Recall’**
  
  20 million toy units recalled in the United States
  
  Consumer Product Safety Improvement Act of 2008 (CPSIA)

• **Limits in Lead in Paint Reduced to 90 ppm (0.009%)**
  
  – Previously 600 ppm (0.06%)
  
  – Section 101 of the CPSIA, Pub. L. 110-314

• **Limits in Total Lead Content in Substrate created:**

  Phased in to **100 ppm (0.01%)**
• Paint and similar surface-coating materials for consumer use

• Applies to those products that are customarily produced or distributed for sale to or for use, consumption, or enjoyment of consumers in or around a household, in schools, or in recreation.

• Also applies to products that are used or enjoyed by consumers after sale, such as paints used in residences, schools, hospitals, parks, playgrounds, and public buildings where consumers will have direct access to the painted surface.
• Excluded paint and coatings uses:
  – Motor vehicles
  – Boats
  – Industrial
  – Agricultural
(1) Paint and other similar surface-coating materials means fluid, semi-fluid, or other materials, which change to a solid film.

(2) Lead content is calculated (as lead metal) by the weight of the total nonvolatile content of the paint or the weight of the dried paint film.
(3) Toys and children’s products *

*Testing at CPSC-accepted laboratory

(4) Furniture article:

✓ means movable articles,

✓ But does not include appliances, fixtures, or household items.
✓ Agricultural and industrial equipment refinish coatings

✓ Industrial (and commercial) building and equipment maintenance coatings

✓ Traffic and safety marking coatings

✓ Graphic art coatings

✓ Touch-up coatings for agricultural equipment, lawn and garden equipment, and appliances

✓ Catalyzed coatings marketed solely for use on radio-controlled model powered aircraft
These products must bear on the main panel of their label:

✓ “Warning”

✓ “Contains Lead. Dried Film of This Paint May Be Harmful If Eaten or Chewed”

✓ Application prohibitions

✓ Keep out of reach of children
Mirrors that are part of furniture articles to the extent that they bear lead-containing backing paint

Artists' paints and related materials

Metal furniture articles (but not metal children's furniture) bearing factory-applied coatings
Generally, CPSC staff differentiates inks, paints, or pigments from material substrates by applying a razor test.

If the ink, paint, or pigment scrapes off then it is considered to be a surface coating; if it does not scrape off, then it is considered to be part of the substrate itself.

Substrate of children’s products must be third-party testing for lead.

– Different standard and different test method.
• **Substrates of children’s products** are subject to a *different* lead limit of 100 ppm, using different testing methods.
  – Citation: 15 U.S.C. 1278a

• **Accessible component parts only**
  – Citation: 16 CFR §1500.87
• Exemptions to required lead testing include but not limited to:
  • Paper and similar materials made from wood or other cellulosic fiber, including, but not limited to, paperboard, linerboard, and medium and *coatings on such paper which become part of the substrate*.
  • Dyed and undyed *textiles*
  • CMYK process printing inks

Third party lab testing *not* required to verify above list

Full exemption listing at: 16 CFR §1500.91
  – Access via [www.ecfr.gov](http://www.ecfr.gov), under Title 16.
- Congress has permanently banned three phthalates (DEHP, DBP, BBP)
  - Limit: Banned in any amount greater than 0.1 percent (computed for each phthalate, individually) in accessible component parts of (1) children's toys and (2) certain child care articles.
- Congress has also banned (on an interim basis) three additional phthalates (DINP, DIDP, DnOP)
  - Limit: in any amount greater than 0.1 percent (computed for each phthalate individually) in accessible component parts of (1) a children's toy that can be placed in a child's mouth, and (2) child care articles.
✓ Chronic Hazard Advisory Panel (CHAP) on Phthalates, report available on www.cpsc.gov
• The ban does not apply to component parts that are inaccessible to a child.
• Applies only to plasticized component parts (or other product parts that could conceivably contain phthalates) of children's toys and child care articles.
• It is not necessary to test and certify materials that are known not to contain phthalates or to certify that phthalates are absent from materials that are known not to contain phthalates.
The Toy Standard, ASTM F963-11, also includes requirements for the soluble limits of eight heavy metals:

- Antimony; Arsenic; Barium; Cadmium; Chromium; Lead; Mercury; Selenium

- Both surface coatings and substrates

- The requirements apply to toys but are sometimes referenced in retailer and other requirements.

- Total screening test available to test all eight metals in one test.
**Initial Certification Testing:** Children’s products must be tested for compliance at CPSC-accepted laboratories. Products must be certified in a Children’s Product Certificate.

**Periodic Testing:** Children’s products with continuing production must be retested and recertified at a minimum of once every year, except for those manufacturers conducting additional production testing. 16 CFR Part 1107.

**Material Change Testing:** Material changes require a retest of the product or of the component part that was changed.

[www.cpsc.gov/testing](http://www.cpsc.gov/testing)

[www.cpsc.gov/cpc](http://www.cpsc.gov/cpc)
Component Testing: Certifiers may rely upon the test results or a certification from a component part supplier if the requirements in the regulation at 16 CFR Part 1109 are met.

In order to rely upon test results or a certification from a supplier, you must use due care to ensure that the tests results or the certificate is valid, and be given access to the underlying documentation. Component testing is completely voluntary.

www.cpsc.gov/testing
www.cpsc.gov/cpc
• Composite testing is allowed to test for lead in paint, lead, and phthalates as long as the requirements at 16 CFR § 1109.21 are met.

• One may test a combination of different samples as long as test procedures are followed to ensure that no failure to comply with applicable limits will go undetected, and as long as the other requirements for component part testing are met.
• General approach is to carefully scrape lead from surface of a sample, taking care not to include substrate material; digest an aliquot completely in nitric acid.
• Analyze by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES). Other analytical methods, such as Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) and others may be acceptable.
Testing Methods:

• Energy Dispersive XRF Spectrometry Using Multiple Monochromatic Excitation Beams (EDXRF) can be used to determine quantitatively the amount of Pb in paint by following ASTM F2853-10e1, with limitations.

• May rely on EDXRF for certification using third party, CPSC-accepted laboratories.
• General approach is to grind or cut any accessible component part of a sample into small pieces or a powder; digest an aliquot completely in nitric acid, or for siliceous products, in a combination of hot, concentrated nitric and hydrofluoric acids;

• Analyze by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES).

• Other analytical methods, such as Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) and others may be acceptable.
Testing Methods:

• Staff have studied the effectiveness, precision, and reliability of XRF

• May rely on XRF for certification to total lead content using third party, CPSC-accepted laboratories.

• XRF spectroscopy can be used, with limitations, to determine lead content in homogeneous metal, plastic, siliceous, and polymeric materials substrates.
  — Not suitable for testing glazed ceramics or electroplated metals as these are inhomogeneous

• Use of standard reference materials and standardized test method are needed.

• Periodic review of test methods no less than every 5 years
Testing Methods for Lead Content:

- Energy Dispersive XRF Spectrometry Using Multiple Monochromatic Excitation Beams (MMB-XRF) as well as other forms of Energy Dispersive XRF Spectrometry (EDXRF) can be used to determine quantitatively the amount of Pb in homogeneous materials.

- Follows ASTM F2853-10e1 (for EDXRF) or ASTM F2853-10 (for other EDXRFs), each with specific limitations, as set forth in CPSC-CH-E1001-08.3 (metals) and CPSC-CH-E1002-08.3 (non-metals) (as well as for paint, as discussed previously).

- The CPSC methods explain testing requirements to determine homogeneity and additional instrumental QC requirements beyond those for EDXRF for other MMB-EDXRF instruments.

- May rely on XRF for certification using third party, CPSC-accepted laboratories.
Key Website Links

General Business Education
www.cpsc.gov/BusinessEducation
www.cpsc.gov/DesktopGuide

Testing & Certification
www.cpsc.gov/Testing
www.cpsc.gov/CPC
www.cpsc.gov/LabSearch

Key Substantive Requirements
www.cpsc.gov/leadinpaint
www.cpsc.gov/lead
www.cpsc.gov/phthalates
RESOURCES

Desktop Reference Guide
www.cpsc.gov/desktopguide

CPSIA Resources
www.cpsc.gov/GettingStarted

Twitter
@CPSCSmallBiz

Slideshare
Downloadable Presentations
www.SlideShare.net/USCPSC

Email list signup
www.cpsc.gov/email
Thank You

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Questions?
Blocks
Toy Cars
Books

- Dead Whales Can't Wave Back
- If You Give a Mouse a Cookie
- Goodnight Moon
Furnishings
Packaging
Questions?

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