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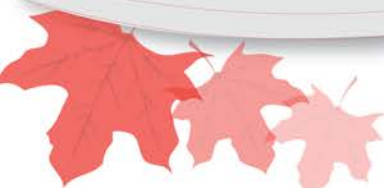
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September 27, 2016  
Vietnam Buyers Training

# Health Canada's Safety Requirements for Children's Toys

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Canada 

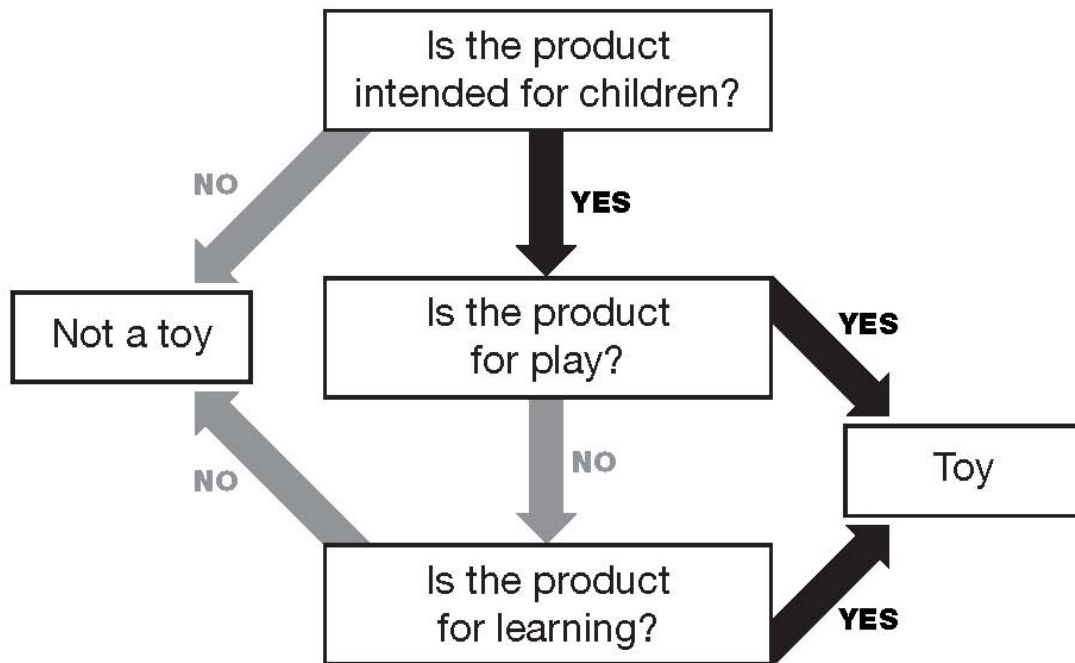


# REGULATORY FRAMEWORK

- The main regulation for children's toys in Canada is the *Toys Regulations*
  - set out mandatory safety requirements that address a wide range of hazards: mechanical, flammability, toxicological, electrical, thermal and other
- Several other regulations under the *Canada Consumer Product Safety Act* (CCPSA) may also apply to a specific toy, depending on how the toy is designed, marketed, constructed or what it is made of:
  - *Asbestos Products Regulations* (SOR/2007-260)
  - *Consumer Products Containing Lead (Contact with Mouth) Regulations* (SOR/2010-273)
  - *Glazed Ceramics and Glassware Regulations* (SOR/98-176)
  - *Hazardous Products (Tents) Regulations* (SOR/90-245)
  - *Phthalates Regulations* (SOR/2010-298)
  - *Science Education Sets Regulations* (C.R.C., c. 934)
  - *Surface Coating Materials Regulations* (SOR/2005-109)
  - *Textile Flammability Regulations* (SOR/2011-22)

# DEFINITION

- “Toy” is defined as  
    **“a product that is intended for use by a child in learning or play”**
- Health Canada considers toys intended for use by children **under 14 years of age** to be captured by this definition.



Toy	Non-toy
	
	

# MECHANICAL HAZARDS



- **Suffocation** hazards from flexible film bags used to package toys
- **Choking, ingestion and aspiration** hazards from small parts in toys for children under three years of age
- **Laceration** hazards from sharp edges and points
- **Shearing and impact** hazards from toys with folding mechanisms
- **Finger entrapment** hazards from toys with winding mechanisms
- **Eye puncture** hazards from projectile toys
- **Fall hazards** from stationary toys that are intended to hold the weight of a child

# SMALL PART HAZARDS

- Requirement that no part or component that is meant to be separable or can separate during **reasonably foreseeable use** (RFU) is small enough to be totally enclosed in the **small parts cylinder using a force of 4.45N or less**.
- Applies to toys likely to be used by children under 3 years of age.



Exception – small parts made entirely of soft textile fibre material (for example, cotton doll socks)





# REASONABLY FORESEEABLE USE

- The *Toys Regulations* do not specify standard tests for RFU.
- Health Canada's Product Safety Laboratory has developed a standard drop test and a standard push/pull test procedure.
  - *Method M-01.1: Reasonable Foreseeable Use - Toys (2013-10-30)*

Age	Drop	Push / Pull
<3 years	1.37 m, 4 x	44.5 N, 10 s
3+ years	0.91 m, 4 x	44.5 N, 10 s

- Other tests for RFU may be used for compliance assessments depending on how a toy is intended or likely to be used







# SMALL PARTS VIOLATIONS

- Common violations:
  - Simple puzzles – pieces are too small, small pegs break off
  - Simple cars and trucks – small wheels separate
  - Dolls, plush toys – eyes and other small parts separate
  - Bath toys – squeakers separate
  - Rattles – made of brittle plastic that breaks when dropped
  - Toys with small batteries – batteries separate



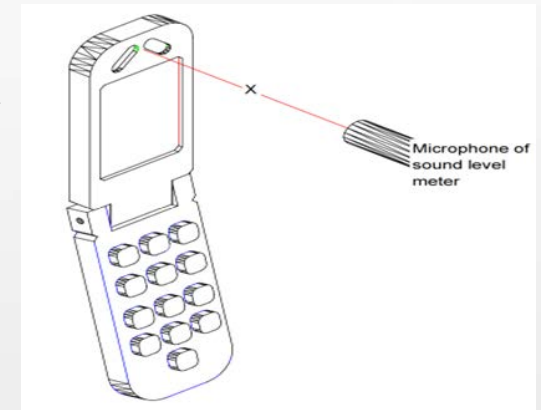
# ELECTRICAL HAZARDS

- All **electrically operated toys** are required to meet the Canadian: CSA C22.2 No. 149-1972, *Electrically Operated Toys*.
    - Part of Canadian Electrical Code
    - Applies to toys operating at  $\leq 120$  volts
    - Does not apply to battery-operated toys (unless toy has a rechargeable battery that is not removed from it for charging)
    - Does not apply to wood-burning tools
  - **All** toys that are **electrical wood-burning tools** are required to meet the Canadian: CSA C22.2 No. 122-M1989, *Hand-Held Electrically Heated Tools*
    - Part of Canadian Electrical Code
    - Applies to portable hand-held electrically heated tools operating at  $\leq 250$  volts
- 



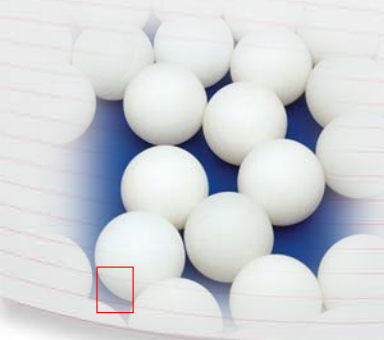
# SOUND

- A toy must not make or emit a sound pressure level of more than 100 dB.
  - Applies to all sound emitting toys for children.
  - Toys are tested for maximal sound pressure level at the distance from the ear that they would ordinarily be used at.
  - Health Canada's test method identifies standard use distances for different types of toys.
    - *Method M-04 Sound Level of Toys (2015-07-14)*





- Toys must not be made of, or impregnated with, celluloid or cellulose nitrate
  - ping pong balls are exempt.
- The outer fabric of a doll, plush toy or soft toy must have a flame spread time greater than 7 seconds over a distance of 127 mm (45 degree angle test)
- For yarn or hair on a doll, plush toy or soft toy, different flammability requirements and tests apply.



# TOXICOLOGICAL HAZARDS

- The *Toys Regulations* protect children from specific toxic substances
  - Apply to substances accessible under reasonably foreseeable circumstances
  - Apply to substances used as fillings where the substance could be released if the container breaks or leaks
- Applicable toys must not contain:
  - **carbon tetrachloride** or any substance that contains it
  - **methyl alcohol** or substance with  $> 1\%$  w/v methyl alcohol
  - **petroleum distillate** or substance with  $> 10\%$  w/v petroleum distillates
  - **benzene**
  - **turpentine** or substance with  $> 10\%$  w/v turpentine
  - **boric acid** or salts of boric acid
  - **ethyl ether**
- Balloon blowing kits with organic solvents are not allowed





# TOXICOLOGICAL HAZARDS – GENERAL TOXICITY

- The *Toys Regulations* set requirements for toys that contain a toxic substance
  - No specific toxic substances are identified
  - To be compliant, at least one of the following requirements must be met:
    - The substance must be inaccessible – no ingestion, no inhalation, no absorption possible
    - The total quantity of substance available must be  $\leq 1\%$  of the oral or dermal median lethal dose (whichever is lower) calculated for a child with 10 kg body weight
    - The substance must not be excessively toxic – it must not exceed the limits set out in Schedule 2

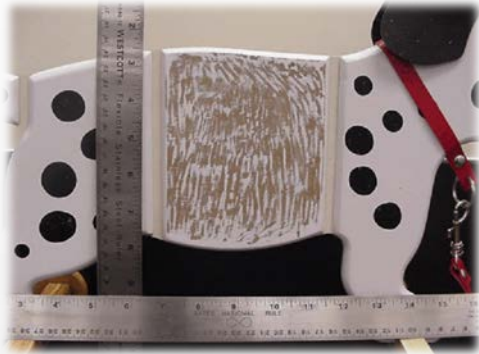


# TOXICOLOGICAL HAZARDS – CORROSIVES, IRRITANTS AND SENSITIZERS

- The *Toys Regulations* set requirements for toys that contain a corrosive substance, an irritant or a sensitizer
  - No specific substances are identified
- To be compliant, at least one of the following requirements must be met:
  - The substance must not be capable of coming in contact with the skin
  - The substance must not be excessively corrosive, the irritant must not be excessively irritating, and the sensitizer must not be excessively strong when tested according to Schedule 3.



# SURFACE COATING



- The surface coatings, such as paint, varnish and stickers, on toys must not contain specific elements in excess of prescribed limits:
  - Total lead content in coating must be  $\leq 90$  mg/kg
  - Soluble antimony, arsenic, cadmium, selenium and barium content in the coating must each be:
    - $\leq 0.1\%$  (after 10 minutes stirring in 5% HCl at 20°C)
- There must be **no mercury** present in the coating
  - Policy: action level is 10 mg/kg for total mercury





# REQUIREMENTS FOR SPECIFIC PRODUCTS



# DOLLS, PLUSH TOYS AND SOFT TOYS

- Small hard eyes and noses must not separate with application of a 9 kg load for 5 minutes -- this strict requirement is applied to dolls, plush toys and soft toys.
- Laceration hazards are addressed with requirements for stuffing material and fasteners.
- Stuffing material must be clean, non-toxic and non-irritant.
- Flammability hazards in textile, fur or yarn outer coverings are addressed with 45 degree angle test to check for flame spread time.
- Flammability hazards in hair like elements are addressed with flame application, and must self-extinguish.



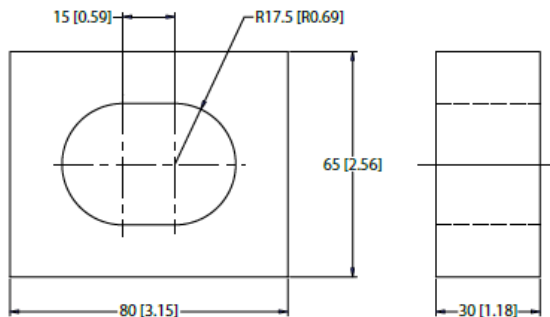
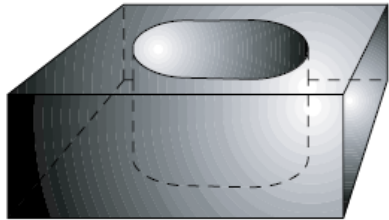
# PLANT SEEDS



- Plant seeds are restricted from use in certain children's toys.
- Objective is to protect children from variety of hazards: toxicity, allergens, impaction, aspiration and exposure to vermin.
- A toy likely to be used by a child <3 years of age must not contain plant seeds for making noise (visual examination).
- Regardless of intended age, a stuffed toy must not contain plant seeds as stuffing material (visual examination).
- Even if a seed has been treated (e.g., it is no longer viable, etc.), the restriction still applies.
- Plant seeds include: barley, corn kernels, oat seeds, rice, lavender seeds, flax seeds, etc.

# Rattles

- Requirements that address impact hazards for rattles



- A rattle is a toy that is intended to be held in the hand of an infant and to make noise when it is shaken
- An impaction gauge test is specified to test rattles parts that could become impacted in an infant's throat and block airflow
- The impaction gauge test is also used on parts that can be removed from a rattle with either a 50 N force or a 1 N-m torque





# Yo-Yo Type Balls



- Requirements that address strangulation hazards for yo-yo type balls:
  - Yo-yo type balls must not have a cord (tether) that can stretch to  $\geq 500$  mm
  - Policy exception: yo-yo type balls with a ball end weighing  $< 20$  g are not considered “yo-yo type balls and similar products” (aligns with international standards)
  - No formal method, stretch by hand





# CANADA CONSUMER PRODUCT SAFETY ACT TOY SAFETY – OTHER REGULATIONS



# PHTHALATES REGULATIONS

- The *Phthalates Regulations* restrict the allowable concentrations of six phthalates in soft vinyl toys (under 14 years of age) and childcare articles (under 4 years of age).



- limit of  $\leq 1,000$  mg/kg (0.1%) for each of DEHP, DBP and BBP

- applies to **ALL** vinyl components

- limit of  $\leq 1,000$  mg/kg (0.1%) for each of DINP, DIDP and DNOP

- applies if the vinyl can be brought to a child's mouth and kept there for sucking or chewing **AND** one of its dimensions is less than 5 cm

- note: dimensions for inflatables are determined when the product is deflated



# CONSUMER PRODUCTS CONTAINING LEAD (CONTACT WITH MOUTH) REGULATIONS

- Restrict total lead to  $\leq 90$  mg/kg in all accessible product components.
- Total lead limit applies to:
  - toys for children  $<3$  years of age
  - products, other than kitchen utensils, that are brought into contact with the user's mouth in the course of normal use

Examples:

- sport mouthpieces, drinking straws
- toys for children 3+ years that are brought to the mouth during normal use, such as a toy harmonica
- children's crayons, chalk, modelling clays and similar products



# CHILDREN'S JEWELLERY REGULATIONS: LEAD

- Limit the lead content of children's jewellery to not more than
  - 600 mg/kg total lead, and
  - 90 mg/kg migratable lead
- Children's jewellery is defined as:
  - jewellery that is manufactured, sized, decorated, packaged, advertised or sold in a manner that appeals primarily to children under 15 years of age; and
  - it does not include merit badges, medals for achievement or similar objects normally worn only occasionally.
- For enforcement purposes, children's jewellery is defined as decorative items intended for regular wear on the body or on clothing or clothing accessories. Children's jewellery components sold separately subject to the Regulations.



# CHILDREN'S JEWELLERY REGULATIONS: CADMIUM



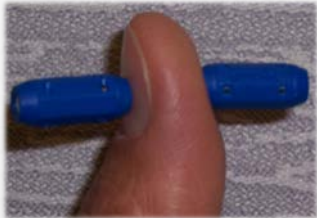
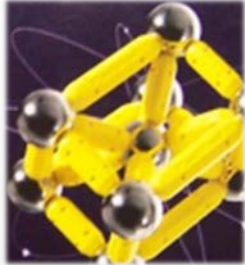
- Informal reports indicated that cadmium was being substituted for lead in children's jewellery imported into North America.
- Health Canada found high levels of cadmium in jewellery items tested in 2009 through 2012.
- In 2011, Health Canada scientists determined that a guideline limit of not more than **130 mg/kg total cadmium** was appropriate for children's jewellery.
  - [http://www.hc-sc.gc.ca/cps-spc/legislation/consultation/\\_2011cadmium/draft-ebauche-eng.php](http://www.hc-sc.gc.ca/cps-spc/legislation/consultation/_2011cadmium/draft-ebauche-eng.php)
- Since 2011, Health Canada has negotiated voluntary recalls of children's jewellery items containing more than 130 mg/kg total cadmium.





# SMALL POWERFUL MAGNETS

- The specific magnetic toys considered to pose a “danger to human health or safety” are those that contain one or more loose small powerful magnets or one or more loose small powerful magnetic components
  - **Small:** a magnet or magnetic component that can be entirely enclosed in the small parts cylinder
  - **Powerful:** a magnet with a magnetic flux index of  $50 \text{ kG}^2\text{mm}^2$  or more
    - when assessed according to the method described in sections 8.24.1 to 8.24.3 of *ASTM F963-11, Standard Consumer Safety Specification for Toy Safety*, or an equivalent method for the determination of magnetic flux index
- For magnetic toys with an embedded magnet in a large component it is critical that a small powerful magnet does not separate from the component with reasonably foreseeable use





# TESTING







# Testing Toys for Safety

- In Canada, provincial and territorial legislation requires that electric toys must have a compliance certification mark from a certification body accredited by the Standards Council of Canada.
  - The certification mark indicates that the toy has been tested and meets all relevant requirements under the *Canadian Electrical Code*.
- No other test or certification requirements are mandatory under the CCPSA for toys.
- However, testing a toy against the requirements under the CCPSA is the only way to verify compliance.
- Health Canada urges industry members to complete compliance testing before a toy is placed on the market in Canada.
- Instructions for obtaining Health Canada's test methods:  
[www.hc-sc.gc.ca/cps-spc/prod-test-essai/index-eng.php](http://www.hc-sc.gc.ca/cps-spc/prod-test-essai/index-eng.php)



# Key Differences



- Heavy metals
  - In Canada, a 90 mg/kg total lead content limit applies to surface coatings on toys and to toy substrate materials (in toys for children under 3 years), while in the U.S. a 90 mg/kg total lead content limit applies for coatings and a 100 mg/kg limit applies for substrates (with some exceptions)
- Product specific requirements
  - Canada has fewer specific requirements for certain categories of toys than the U.S. (e.g., toy guns, wheeled ride-on toys, mouth-actuated toys, inflatable toys, doll pacifiers, preschool play figures, marbles, hemispheric-shaped toys)
- Testing
  - Canada does not require third party testing of toys, third party testing is required in the U.S.
- Standard
  - In the U.S. the ASTM F963 toy safety standard is mandatory, in Canada the standard is referred to primarily for application of the general safety requirement for unregulated hazards.



# RESOURCES

## ***Industry Guide to Canadian Safety Requirements for Children's Toys and Related Products, 2012***

- <http://www.hc-sc.gc.ca/cps-spc/pubs/indust/toys-jouets/index-eng.php>

## ***Toys: Age Classification Guidelines, 1998 Hardcopy available***

## **Consumer Product Recalls web-page**

- <http://209.217.71.106/PR/home-accueil-e.jsp>

## **Subscribe to Consumer Product Safety News**

- [http://www.hc-sc.gc.ca/cps-spc/advisories-avis/\\_subscribe-abonnement/index-eng.php](http://www.hc-sc.gc.ca/cps-spc/advisories-avis/_subscribe-abonnement/index-eng.php)

## **Health Canada, Product Safety Laboratory, Test Methods**

- <http://www.hc-sc.gc.ca/cps-spc/prod-test-essai/index-eng.php>



# THANK YOU

**Canada**  
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Program

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