

Subject 4200

June 11, 2010

SUMMARY OF TOPICS

The following first edition of the Standard for Products with Child-appealing or Toy-like Features, UL 4200, is being proposed for preliminary review and comment only:

1. For Preliminary Review Only: Proposed First Edition of the Standard for Products with Child-appealing or Toy-like Features

COMMENTS DUE: JULY 12, 2010

This proposal is for review and comment only (no ballot at this time). Please note that comments on a preliminary review document will not receive a response from the proposal author through CSDS. Instead, the proposal author will be asked to review the comments and adjust the proposals and/or supporting rationale as the author determines to be appropriate. The preliminary review process is an informal mechanism that provides authors with the opportunity to refine their proposals before they advance to the next stage in UL's standards development process.

In some cases, the author of the proposals may choose to discontinue them. In this case, the author need not do anything after preliminary review has ended. Normally, the next step in the process is the more formal STP ballot and stakeholder review process. Only comments posted during the STP ballot and stakeholder review process will be provided with a response in CSDS.

1. For Preliminary Review Only: Proposed First Edition of the Standard for Products with Child-appealing or Toy-like Features

RATIONALE

Proposal submitted by: Ken Boyce, Underwriters Laboratories Inc.

For non-toy products that have child-appealing or toy-like features, additional requirements are applicable to mitigate the potential hazards these products present for young children. Examples include appliances shaped like, or decorated with, cartoon characters. A child may be unable to differentiate between an appealing object and an electric (or other) product that has similar appeal. A child might be induced or encouraged to touch, explore and experiment, and move such products although they are not designed or clearly intended to be handled or used by children or to be played with like toys. Potential hazards to children through foreseeable use or misuse include electric shock, electrical burn, thermal burn, choking, aspiration, ingestion of hazardous or toxic materials, entrapment, pinching, and laceration. In considering the potential hazards and the mitigation mechanisms, the ages and corresponding basic life skills, physiological characteristics, and safety awareness of children who may access the product must be taken into account. The specific requirements are based on Hazard-based Safety Engineering (HBSE) analysis and requirements and guidance from applicable requirements of standards addressing child interaction with products: UL 696, the Standard for Electric Toys, and ASTM F 963, the Standard Consumer Safety Specification for Toy Safety.

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National laws, regulations and requirements apply to toys and other children's articles. They may define what constitutes a toy and what requirements apply. The application of additional requirements anticipated under this proposal does not classify a product subject to the requirements as a toy, nor is it intended to satisfy regulatory obligations that may apply to children's articles.

PROPOSAL

Products with Child-appealing or Toy-like Features

INTRODUCTION

1 Scope

1.1 These requirements cover household products that have child-appealing features or toy-like features, which are not intended to be used as toys. These requirements do not cover toys and are not intended to satisfy regulatory obligations that may apply to children's articles.

1.2 These requirements also cover products specifically identified by the manufacturer for use by children.

1.3 Electric toys are covered by the Standard for Electric Toys, UL 696.

1.4 Electric toy transformers are covered by the Standard for Toy Transformers, UL 697.

2 Units of Measurement

2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

3 Undated References

3.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

4 Glossary

4.1 For the purpose of this standard the following definitions apply.

4.2 CHILD-APPEALING OR TOY-LIKE FEATURES – Features that provide visual appeal and attraction to children fourteen years or less in age, in the form of shape, decoration or unusual illumination, that comprise play value, or that induce or encourage children to touch, explore or experiment.

4.3 PLAY VALUE – Features that promote a child's interactive exploration and use a child's imagination and ability to pretend to create enjoyable play and incorporates a child's interest to encourage repeat play. Such features may include interactive characteristics similar to those of familiar toys (i.e., stuffed animals, model vehicles with moving parts, buildings, sports equipment, cartoon characters, playhouses, or a "busy box" with lights, sliding or rotating features, or manually actuated music, and similar features), that are attractive to children eight years or less in age.

4.4 ACCESSIBLE TO CHILDREN – Used in locations where a child may be reasonably expected to have full access to a product, based on function, installation environment, and length of product use.

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CONSTRUCTION

5 Products with Child-appealing or Toy-like Features

5.1 General

5.1.1 For products that have child-appealing features or toy-like features, additional requirements apply to mitigate the potential hazards these products may present for children. Potential hazards may result from a child being unable to differentiate between an appealing object and an electric (or other) product that may present hazards through the child handling the product or through foreseeable use or misuse.

5.1.2 Products with child-appealing features or toy-like features include but are not limited to:

- a) Products formed in the shape of a person, character or animal, and also having one of the features in items (b) or (c);
- b) Products with readily identifiable images or shapes of cartoon characters, similar characters, or faces;
- c) Products with bright colors, sparkling lights, or bright blinking or flashing lights, that may attract children;
- d) Products formed in the shape of a toy, sports equipment, or scale model;
- e) Products having play value;
- f) Products that a child can ride upon, or that induce or encourage a child to sit or stand upon; or
- g) Products specified by the manufacturer for use by children.

5.1.3 Products with child appealing or toy-like features with the following or similar uses necessitate the application of additional requirements:

- a) Intended or reasonably foreseeable use, in locations where a child may access the product. This applies to both intermittent use and continuous or extended use in such locations;
- b) Use of an electric product in water or to handle water, or portable products reasonably expected to be used in proximity to water;
- c) Products having hot surfaces, functional or otherwise; or
- d) Reasonably foreseeable use or access by a child to electrical products where there is not direct supervision by an adult caregiver, while the product is connected to a source of supply that represents an electric shock hazard or other electric hazard.

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5.2 Additional requirements

5.2.1 Additional requirements shall be applied to minimize risk of electrical, fire, personal injury hazards as a result of the child accessing, handling, using, or misusing the product in a reasonably foreseeable manner. Other hazards unique to the particular product design shall also be addressed.

5.2.2 The requirements of the Standard for Electric Toys, UL 696, and Standard Consumer Safety Specification for Toy Safety, ASTM F 963, shall be used where applicable.

5.2.3 Requirements shall be defined using hazard-based safety engineering analysis of the particular child appealing or toy-like features, considering product function and use.

5.2.4 Products shall be subjected to the most stringent applicable requirements based on reasonably foreseeable child access to the product.

5.2.5 Product safeguards that require intentional user action to engage while the product is in use are to be disregarded.

5.2.6 Child access to energized products shall be considered unless the product has integral features to minimize the occurrence of such access, such as requiring two independent actions to energize.

5.2.7 In considering products with child appealing or toy-like features that may be accessed by children age less than age 8, no reliance shall be placed on children's response to markings or instructions.

5.2.8 Enclosures and guards shall be assembled by welding, riveting, or the use of screws requiring the use of a tool to remove.

5.3 Accessibility of uninsulated live parts, film-coated wire, and moving parts

5.3.1 To reduce the likelihood of unintentional contact that may involve a risk of electric shock from an uninsulated live part or film-coated wire, or injury to persons from a moving part, an opening in an enclosure shall comply with either of the following:

- a) For an opening that has a minor dimension (see 5.3.5) less than 1 inch (25.4 mm), such a part or wire shall not be contacted by the probe illustrated in Figure 5.1.
- b) For an opening that has a minor dimension of 1 inch or more, such a part or wire shall be spaced from the opening as specified in Table 5.1.

Exception: A motor other than one used in either a hand-held product or a hand-supported portion of a product need not comply with these requirements if it complies with the requirements in 5.3.2.

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Table 5.1
Minimum acceptable distance from an opening to a part that may involve a risk of electric shock or injury to persons

Minor dimension ^a of opening		Minimum distance from opening to part	
Inches ^b	(Millimeters) ^b	Inches ^b	(Millimeters) ^b
3/4 ^c	(19.1)	4-1/2	(114.0)
1 ^c	(25.4)	6-1/2	(165.0)
1-1/4	(31.8)	7-1/2	(190.0)
1-1/2	(38.1)	12-1/2	(318.0)
1-7/8	(47.6)	15-1/2	(394.0)
2-1/2	(54.0)	17-1/2	(444.0)
d		30	(762.0)

^a See 5.3.5.
^b Between 3/4 inch and 2-1/8 inches, interpolation is to be used to determine a value between values specified in the table.
^c Any dimension less than 1 inch applies to a motor only.
^d More than 2-1/8 inches, but not more than 6 inches (152 mm).

5.3.2 With respect to a part or wire as mentioned in 5.3.1, in an integral enclosure of a motor as mentioned in the exception to 1.1:

a) An opening that has a minor dimension (see 5.3.5) less than 3/4 inch (19.1 mm) is acceptable if:

- 1) A moving part cannot be contacted by the probe illustrated in Figure 5.2;
- 2) Film-coated wire cannot be contacted by the probe illustrated in Figure 5.3;
- 3) In a directly accessible motor (see 5.3.6), an uninsulated live part cannot be contacted by the probe illustrated in Figure 5.1; and
- 4) In an indirectly accessible motor (see 5.3.6), an uninsulated live part can not be contacted by the probe illustrated in Figure 5.2.

b) An opening that has a minor dimension of 3/4 inch or more is acceptable if a part or wire is spaced from the opening as specified in Table 5.1.

5.3.3 The probes mentioned in 5.3.1 and 5.3.2 and illustrated in Figures 5.1 – 5.3 shall be applied to any depth that the opening will permit; and shall be rotated or angled before, during, and after insertion through the opening to any position that is necessary to examine the enclosure. The probes illustrated in Figure 5.1 shall be applied in any possible configuration; and, if necessary, the configuration shall be changed after insertion through the opening.

5.3.4 The probes mentioned in 5.3.3 and 5.3.5 shall be used as measuring instruments to judge the accessibility provided by an opening, and not as instruments to judge the strength of a material; they shall be applied with the minimum force necessary to determine accessibility.

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