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NATIONAL STANDARD OF THE
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GB 19865-2005 / IEC 62115:2003

Electric toys - Safety

电玩具的安全

(IEC 62115:2003, IDT)

[Including No.1 Amendment 2022XG1]

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Foreword

All technical contents of this Standard are mandatory.

This Standard is identical to IEC 62115:2003 *ELECTRIC TOYS – SAFETY* and with amendment A1:2004. Annex A, Annex B, Annex C and Annex E of this Standard are normative annex, Annex D is informative annex.

The main differences between this Standard and IEC 62115:

In normative references of Chapter 2, in accordance with the national conditions in China, "GB 1002" and "GB 1003" will replace the "IEC 60083" standard in English, the differences have been incorporated into the text and identified by a single vertical line in page margin of involved terms.

This Standard is identical to the IEC 62115:2003, it has A1 amendment (2004), the amendment content have been incorporated into the text of this Standard and identified by a single vertical line in page margin of the text.

From the implementation date of this Standard, the Annex A.A. Battery-powered Toy of GB 6675-2003 is replaced by this Standard.

This Standard is proposed by China National Light Industry Council.

This Standard is under the jurisdiction of National Technical Committee on Household Appliances Condenser of Standardization Administration of China and National Technical Committee on Toys of Standardization Administration of China.

The responsible drafting organizations are China Testing & Inspection Institute for Household Electric Appliances, Certification Center of Light Industry Council, Guangzhou Testing & Inspection Institute for Household Electrical Appliances, Toy Testing Technology Center of Guangdong Entry-Exit Inspection and Quarantine Bureau, Shanghai Bureau of Quality and Technical Supervision, Shantou Chenghai Meijiixin Plastic Toy Co., Ltd, Shantou Hengtai Plastic Industrial Co., Ltd, Shanghai C.C.Lee Model Co., Ltd and Guangdong Auldey Toys Industrial Co., Ltd.

The chief drafting staffs of this Standard includes Yang Chunrong, Zhang Yanfen, Bin Xuwei, Liu Ronggui, Liu Gonggui, Yan Ganghua, Li Binzhong, Pan Quan, Chen Yongqiang and Zhang Zhen.

Electric toys - Safety

1 Scope

This Standard deals with the safety of toys that have at least one function dependent on electricity.

NOTE 1: The toys within the scope of this Standard also include:

- Constructional toys;
- Experimental toys;
- Functional toys (toys that have functions similar to apparatus or device used by adults);
- Video toys (toys consisting of a screen and activating means, such as a joystick or keyboard. Separate screens having a rated voltage exceeding 24 V are not considered to be a part of the toy).

Additional requirements for experimental toys are given in Annex A.

Toys using electricity for secondary functions are within the scope of this Standard.

NOTE 2: A doll's house having an interior lamp is an example of such toy.

Additional requirements for toys incorporating lasers and light-emitting diodes are given in Annex E.

In order to comply with this Standard, electric toys must also comply with Annex A in GB 6675-2003, because it covers the hazard which is different from the hazard caused by the use of electricity.

NOTE 3: Transformer for toy and battery charger shall not be considered as toy, even if supplied with the toy.

NOTE 4: If it is intended that a child also plays with the packaging, the latter is considered to be part of the toy.

NOTE 5: This Standard does not apply to

- toy steam engines;
- scale models for adult collectors;

- folk dolls and decorative dolls and other similar articles for adult collectors;
- sports equipment;
- aquatic equipment intended to be used in deep water;
- equipment intended to be collectively used in playground;
- amusement machines (GB 4706.69);
- Professional toys installed in public places (shopping centers, stations, etc.);
- products containing heating elements intended for use under the supervision of adult and for teaching purpose;
- portable child-interested lights (GB 7000.4);
- Christmas decorations.

2 Normative References

The articles contained in the following documents have become part of this Standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB 1002 , Single phase plugs and socket-outlets for household and similar purposes - Types basic parameters and dimensions

GB 1003, Three phases plugs and socket-outlets for household and similar purposes - Types, basic parameters and dimensions

GB 4208-1993, Degrees of protection provided by enclosure (IP code) (eqv IEC 60529:1989)

GB/T 5169.5-1997, Fire hazard testing for electric and electronic products-Part 2: Test methods-Section 2: Needle-flame test (idt IEC 60695-2-2:1991)

GB/T 5169.11-1997, Fire hazard testing for electric and electronic products-Test methods-Glow-wire end-product test and guidance (idt IEC 60695-2-1/1:1994)

GB/T 5169.13-1999, Fire hazard testing for electric and electronic products-Test methods-Glow-wire ignitability test on materials (idt IEC 60695-2-1/3:1994)

GB/T 5169.16-2002, Fire hazard testing for electric and electronic products--Part 16:50 W horizontal and vertical flame test methods (IEC 60695-11-10:1999,IDT)

Annex E

(Normative)

Toys incorporating lasers and LEDs

The following modifications to this Standard are applicable for toys incorporating lasers and light-emitting diodes.

3 Definitions

3.6 laser

The device that can produce or amplify electromagnetic radiation in the wavelength range from 180 nm to 1 mm, primarily by the process of controlled stimulated emission

3.7 light-emitting diode (LED)

The semiconductor PN junction device that can produce electromagnetic radiation in the wavelength range from 180 nm to 1 mm

NOTE: The optical radiation is produced primarily by the process of spontaneous emission, but some stimulated emission may be present.

5 General conditions for the tests

5.2 The tests of this annex may be carried out on separate toys after the preconditioning of 5.15.

20 Radiation, toxicity and similar hazards

Toys shall not emit harmful radiation.

Lasers and light-emitting diodes in toys shall meet the requirements for Class 1 lasers in accordance with GB 7247.1.

NOTE 101: Class 1 lasers do not include Class 1 M lasers.

Compliance shall be checked by inspection and by measuring the radiation under the conditions specified in GB 7247.1, the toy is supplied at rated voltage. The measurement is also made with removing parts such as lenses, reflectors or filters, which could affect the focusing of the laser or light-emitting diode, even if that may damage the toy. This measurement is carried out even if the relevant parts of the encapsulation, lenses, reflectors or filters are broken off during the preconditioning of 5.15. The fault conditions listed in 9.8.2 of this Standard shall be considered when testing low-power circuits.

GB 19865-2005 "Electric Toys - Safety"

National Standard No. 1 Amendment [2022 XG1]

This amendment was approved by the State Administration for Market Regulation (National Standardization Administration) on July 13, 2022, and will come into force on July 13, 2022.

I. 7.1.1

CHANGE "- The symbol of d.c, if the toy has a battery box." **TO** "- The symbol of d.c, if the toy has a battery box. However, it does not apply to the batteries which are designed to prevent replacement by other battery boxes or power sources."

II. 7.4

CHANGE "The instructions for transformer toys and instructions for toys with battery boxes shall state that the toy must not be connected to the more-than-recommended-number power supply." **TO** "The instructions for transformer toys and/or instructions for toys with battery boxes shall state that the toy must not be connected to the more-than-recommended-number power supply. However, the following two situations do not need to be declared:

- transformer toys, that require the aid of tools or destruction of the toy, to connect to more power supplies than the number specified or recommended in the instructions for use;
- Toys with battery compartments, that require the use of tools and the use of two identical toys or parts from the same assembled toy, to connect to more power sources than the number specified or recommended in the instructions for use."

III. 9.4

CHANGE "After the detachable parts (except lamps) are removed, the accessible insulations between parts of different polarity shall be short-circuited in turn. The test of 9.3 shall be repeated." **TO** " After the detachable parts (except lamps) are removed, the accessible insulations (except for the battery compartment that requires the use of a tool or at least two independent actions to open the battery cover at the same time) between parts of different polarity shall be short-circuited in turn. The test of 9.3 shall be repeated."

END

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