

INTERNATIONAL STANDARD

IEC 62115

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Electric toys – Safety

*Jouets électriques –
Sécurité*

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International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRIC TOYS – SAFETY

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62115 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

It forms the first edition of IEC 62115.

The text of this standard is based on the following documents:

FDIS	Report on voting
61/2263/FDIS	61/2323/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

NOTE The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

The following differences exist in the countries indicated below.

- 14.2 Controls for railway sets are also not allowed to be incorporated in the transformer (Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom).

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced people.

As a general rule, toys are designed and manufactured for particular categories of children. Their characteristics are related to the age and stage of development of the children and their intended use presupposes certain capabilities.

Accidents are frequently due to a toy either being given to a child for whom it is not intended or being used for a purpose other than for which it was designed. This standard does not eliminate parental responsibility for the appropriate selection of toys. It is assumed that when choosing a toy or a game, account is taken of the physical and mental development of the child who will be playing with it.

The aim of this standard is to reduce risks when playing with toys, especially those risks that are not evident to users. However, it has to be recognized that some toys have risks inherent in their use that cannot be avoided. Consideration has been given to reasonably foreseeable use, bearing in mind that children are not generally as careful as adults.

While this standard applies to new toys, it nevertheless takes into account the wear and tear of toys in use.

The fact that a toy complies with this standard does not absolve parents and other persons in charge of a child from the responsibility of supervising the child. Supervision is also necessary when children of various ages have access to the same toy.

This standard covers the whole range of electric toys from small button cell operated lights to large sit-on cars powered by lead-acid cells. This results in different requirements and tests according to the type of toy. For some toys, testing can be reduced if particular criteria are met (see Clause 6).

A toy that complies with the text of this standard will not necessarily be judged to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

A toy employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be judged to comply with the standard.

ELECTRIC TOYS – SAFETY

1 Scope

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

NOTE 1 Examples of **toys** also within the scope of this standard are

- **constructional sets**;
- **experimental sets**;
- functional **toys** (models that have a function similar to an appliance or installation 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 sets** 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 a **toy**.

In order to comply with this standard, electric toys also have to comply with ISO 8124-1, since it covers hazards other than those arising by the use of electricity.

NOTE 3 **Transformers for toys** and battery chargers are not considered to be a **toy**, even if supplied with it.

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 used collectively in playgrounds;
- amusement machines (IEC 60335-2-82);
- professional **toys** installed in public places (shopping centres, stations, etc.);
- products containing heating elements intended for use under the supervision of an adult in a teaching context;
- portable child-appealing luminaires (IEC 60598-2-10);
- Christmas decorations.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60068-2-75, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60083, *Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC*

IEC 60086-2, *Primary batteries – Part 2: Physical and electrical specifications*

IEC 60320-1, *Appliance couplers for household and similar general purposes – Part 1: General requirements*

IEC 60384-14, *Fixed capacitors for use in electronic equipment – Part 14: Sectional specification – Fixed capacitors for electromagnetic interference suppression and connection to the supply mains*

IEC 60417-1, *Graphical symbols for use on equipment – Part 1: Overview and application*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60695-2-2:1991, *Fire hazard testing – Part 2: Test methods – Section 2: Needle-flame test*

IEC 60695-2-11, *Fire Hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products*

IEC 60695-2-13, *Fire hazard testing – Part 2-13: Glowing/hot-wire based test methods – Glow-wire ignitability test method for materials*

IEC 60695-10-2, *Fire hazard testing – Part 10: Guidance and test methods for the minimization of the effects of abnormal heat on electrotechnical products involved in fires – Section 2: Method for testing products made from non-metallic materials for resistance to heat using the ball pressure test*

IEC 60695-11-10, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

IEC 60730-1:1999, *Automatic electrical controls for household and similar use – Part 1: General requirements*

IEC 60738-1, *Thermistors – Directly heated positive step-function temperature coefficient – Part 1: Generic specification*

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

IEC 61058-1:2000, *Switches for appliances – Part 1: General requirements*

IEC 61558-2-7, *Safety of power transformers, power supply units and similar – Part 2: Particular requirements for transformers for toys*

ISO 7000, *Graphical symbols for use on equipment – Index and synopsis*

ISO 8124-1:2000, *Safety of toys – Part 1: Safety aspects related to mechanical and physical properties*

ISO 8124-3, *Safety of toys – Part 3: Migration of certain elements*

ISO 9772, *Cellular plastics – Determination of horizontal burning characteristics of small specimens subjected to a small flame*