

ENSURE SAFE LEARNING WITH ELECTRICAL AND ELECTRONIC TOY TESTING

Electrical and electronic (EE) toys provide hours of fun for children. Improperly used or badly designed though, they can rapidly turn from a source of fun into a serious hazard.



From early learning to gaming and computing, electrical and electronic toys (EE toys) help children to develop their imagination, language skills and more. Their use should be simple and safe, however, they can become dangerous if not used properly, used without adequate supervision, or if they have faults in their design and/or construction.

Standards and mandatory regulations have been established in major toy markets to reduce the risk of injury from EE toys. In addition to general toy safety, additional regulations address the major electrical, mechanical and thermal hazards of electric toys.

In Europe, toys fall within the scope of multiple standards and directives, even more so for battery and/or mains powered electronic toys (e.g. model railway, electric ride-on toys, computer toys, radio controlled toys, laser LED toys with flashing lights, electronic musical toys).

EU TOY SAFETY DIRECTIVE 2009/48/EC

All toys distributed and marketed in the EU must comply with the EU Toy Safety Directive, which defines the minimum safety requirements for all toys. Annex II, Section IV deals directly with electrical properties, including electrical safety, prevention of electrical hazards and protection against fire hazards, as well as risks arising from electromagnetic compatibility and radiation.

EN 62115: ELECTRIC TOYS – SAFETY

The EN 62115 standard applies a hazard-based approach to toy safety. Covering all aspects of electrical safety in toys EN 62115 has been updated to include requirements for LEDs and lasers in toys, as well as amendment A12, covering risks associated with electromagnetic fields.

To achieve EN 62115 compliance, electric toys must also comply with EN 71-1 (physical and mechanical requirements), EN 71-2 (flammability) and EN 71-3 (migration of certain elements).

EMC DIRECTIVE 2004/108/EC

The Electro Magnetic Compatibility (EMC) Directive 2004/108/EC has been revised and superseded by the new EMC Directive 2014/30/EU. The new directive applies to all new products, including electronic toys, manufactured and sold within the EU, as well as new and old products manufactured outside the EU, but marketed within it.

All electronic toys must be designed and constructed to ensure that:

- Electromagnetic disturbance does not exceed the level above which radio and telecommunications equipment or other equipment cannot operate as intended
- They have a level of immunity to electromagnetic disturbances to enable them to operate without unacceptable degradation in the context of the intended use

The standards that apply to toys are EN 55014-1, EN 55014-2 and their amendments.

R&TTE DIRECTIVE 2014/53/EU

All radio equipment, and equipment intended to be connected to public telecommunications networks within the EU, falls within the scope of the R&TTE Directive. It establishes a regulatory framework for the marketing and use of radio equipment within the EU.

The R&TTE Directive will be repealed and replaced by the Radio Equipment (RED) Directive 2014/53/EU by 12 June 2016.

ROHS2 DIRECTIVE 2011/65/EU

All toys with an EE function fall within the scope of RoHS2, which restricts the use of hazardous substances. Manufacturers must demonstrate a product's compliance by creating technical documentation in accordance with both standard EN 50581 and Annex II, Module A of Decision 768/2008/EC.

WEEE DIRECTIVE 2012/19/EU

The Waste Electrical and Electronic Equipment (WEEE) Directive sets out measures to protect the environment and human health and applies to all manufacturers and producers of EE equipment distributed within the EU. Standard EN 50419 details the marking requirements needed to ensure WEEE compliance.

BATTERY DIRECTIVE 2006/66/EC

With a few exceptions, all batteries and accumulators fall within the scope of the Battery Directive, which is intended to minimise the negative impacts of batteries and accumulators, and their waste. It prohibits the marketing of batteries containing some hazardous substances, and sets collection and recycling targets.

SGS SERVICES

We provide a full suite of safety testing, inspection and certification solutions for electrical and electronic toys that help to ensure that your toys meet legal requirements. Our global network of labs means we have the expertise and experience to conduct EE toy testing wherever you, or your manufacturing operations, are based.

For further information visit www.sgs.com/eutoydirective, contact your local SGS office, or email us at consumer.products@sgs.com.

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