

HAZARDOUS SUBSTANCES IN ELECTRIC & ELECTRONIC TOYS: ROHS 2 COMPLIANCE AND THE EN 50581 STANDARD

RoHS 2 will affect all electric and electronic (EE) toys after its implementation into national law in all EU member states on the due date of January 2, 2013. All EE toys will fall within its scope and manufacturers will need to consider EN 50581, the first harmonised RoHS standard for technical documentation and data management.



Published as Directive 2011/65/EU, RoHS 2 was published on July 1, 2011, coming into force just 20 days later on July 21, 2011. Member states were given 18 months to update their national legislation, making RoHS 2 law from January 2, 2013.

RoHS, an environmental directive, is independent from the new EU Toy Safety Directive and may be in principle understood to apply to all Electric and Electronic Equipment, but definitely including EE toys. In its recast, the RoHS 2 scope extends from toys with a primary electrical function (RoHS, Category 7) to all EE toys, including those whose electrical function is only secondary to its overall play value. For example, a cuddly toy that talks – its primary function as a cuddly toy was exempt by a guidance document from RoHS 1, but it will now fall under the scope of RoHS 2 because it is electrically powered to fulfil this intended function.

RESTRICTED SUBSTANCES

When introducing RoHS 2 the restriction limits remain the same for lead, mercury, chromium VI, the sum of PBB and PBDE at 0.1%, and cadmium at 0.01% on a homogeneous material level. A small number of substances have been identified for potential future inclusion, but (besides nanomaterials) these are already affecting toys via the REACH Regulation - Annex XVII.

ROHS 2 IMPACT ON EE TOYS

- Primary Function

RoHS 1, Category 7 – Toys, Leisure and Sports Equipment covers toys whose primary function is electrical, i.e. toys

that would otherwise be of little or no use, such as electric trains or remote controlled cars. Being in the scope of RoHS 1 EE toys with primary functions needing electricity must comply with RoHS 2 in all EU Member States by January 2, 2013.

- Secondary Function

A toy with a secondary electrical function could be enjoyed without this function working and thus has been exempt from the scope of RoHS 1 by a guidance document of the European Commission. However, as it is an intended function it will now fall within the scope of RoHS 2. In the past there has been some ambiguity in interpreting EE functionality as primary or secondary, however RoHS 2 removes this; all EE toys are now within its scope. Secondary function toys must comply by July 23, 2019 according to the European Directive.

MEMBER STATE VARIATION

When RoHS 1 was passed into national law, some EU Member States (Belgium, Denmark, Estonia, Finland, France, Ireland, Malta, the Netherlands and Sweden) disregarded the non-legal binding guidance document and applied RoHS 1 to all EE toys, regardless of their functionality. As a consequence, these Member States may not allow any transition period for EE toys with secondary functions, to be compliant by July 23, 2019 with national laws but may expect compliance by January 2, 2013.

EN 50581 – DEMONSTRATE COMPLIANCE

Published on November 23, 2012, in the Official Journal of the European Union EN 50581 is the only harmonised RoHS

standard and specifies the technical documentation that must be compiled by manufacturers in order to declare compliance to RoHS 2:

- Product description.
- Documents for materials, parts and/or sub-assemblies.
- Information on the relationship between the documents and materials/parts/sub-assemblies.
- List of harmonised standards and/or other technical specifications used to establish the technical file.

The standard contains details about how to demonstrate RoHS 2 compliance to market surveillance authorities. Technical documentation must be kept for 10 years after putting an EE toy on the market. Furthermore a product which demonstrates to comply with this standard is also presumed to be RoHS compliant.

MARKET SURVEILLANCE

Compliance authorities actively check EE toy compliance to RoHS. In 2011 an EU RoHS enforcement project used XRF to scan 129 consumer electronic products, 79 of them toys. A significant 21% of these products were found non-compliant for their lead content. In 2009 another authority conducted a similar project. Of 118 toys tested 30% were found non-compliant for their lead content.

Improved quality and data management, coupled with better risk assessment and technical documentation guided by the EN 50581 standard, should improve compliance rates and reduce the risks that the supply chain is exposed to.

IMPACT ON CE MARKING

RoHS 2 is now included in the group of CE marking directives. Manufacturers must now assure it is also RoHS 2 compliant beside any other relevant CE directive before applying the CE mark to a product.



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Dr. Udo Krischke
Global Technical Manager RSTS
(Restricted Substances Testing Services)
SGS Germany GmbH
udo.krischke@sgs.com
t +49 6128 - 744 235

RECENT PUBLICATIONS ABOUT RoHS 2

- Certain Member States Already Consider All Electrical Toys to Fall Under RoHS ([SafeGuards No. 005/13](#))
- EN 50581 – New Management Standard for RoHS2 Technical Documentation ([SafeGuards No. 179/12](#))
- RoHS 2 Compliance for E&E Toys ([SafeGuards No. 160/12](#))