Eurofins services

Eurofins is a world-wide operating provider of analytical services to industry and trade, with more than 8000 employees in 30 countries. Several services on toys testing are available within the network of the Eurofins Group.

Compliance testing

Eurofins can offer the necessary tests for all mentioned legislation, and also a number of tests for additional national legislation throughout Europe.

These tests may require determination of hazardous ingredients, or migration from the material into human skin (sweat and skin fat), or saliva - or emission into surrounding air. Selection of appropriate migration simulants is decisive for a reliable test.

Within European Toys Directive, Eurofins is operating two notified bodies for CE marking, one in Italy and one in the UK. Eurofins is approved testing lab for Blue Angel for wooden toys.

Characterisation of material

If the composition of a material and its content of additives needs to be known, Eurofins can carry out different analyses, e.g.

- Material characterisation by IR analysis
- Identification of ingredients by a combination of GC/MS survey and X-ray.

These analyses give a clear indication of the chemical composition of the material.

Consulting

Eurofins follows development of legislation on toys closely. This enables us to support our clients with qualified guidance regarding legislation and how to comply, with assistance for defining specifications to suppliers, and much more.

Good reasons for selecting Eurofins as your business partner

- Focus on solutions that add value to the customer
- Flexible partner with significant capacity
- High quality for fair and sustainable prices
- Reasonable delivery time
- Clear reporting
- Qualified consulting
- International presence
- ….. and our customers will certainly be able to give more good reasons.

We shall always be pleased to give you further information on our tests and analyses, and to prepare a quotation.

Toys Safety - Testing for Compliance with European legislation

Toys safety is a prominent issue of policy in the European Union and its member states. Following a recent decision to revise the Toy Safety Directive, the rules on toy safety in the EU will now be substantially strengthened, in particular with regard to the chemical safety of toys. An overview of the legislation that retailers, wholesalers, importers and manufacturers of toys need to be aware of is given below, with information about some of the services that Eurofins can provide to these companies for showing compliance.

European Toys Safety Directive (88/378/EEC)

The European Toys Safety Directive intends to guarantee that any toys placed on the market will not have any negative impact on the safety and health of the users i.e. children less than 14 years of age. For this purpose the CE mark has to be placed on all toys sold in any member state of the EU, this is the manufacturer’s or his authorised representative’s declaration that the toy satisfies the essential safety requirements set out in the Directive and relevant national legislation.

The criteria for granting this CE mark are defined in a series of European standards, EN 71 Parts 1 to 11. If the toy has been manufactured in accordance with these safety standards - and the standards cover all safety aspects relating to the toy – then it can be self-certified. In such cases it is usual for the toy to be submitted for any relevant testing. Where the standards do not cover all safety aspects relating to the toy, a sample must be submitted for EC type-examination by an independent certification organisation, a so-called Notified Body. This organisation is approved by national authorities for this purpose, and this then is notified to the other EU member states - Eurofins is an approved Notified Body under the Toys Safety Directive for carrying out these examinations.

Phthalates

Directive 2005/84/EC defines restrictions for six specific phthalates and prohibits the placing on the market any toys and childcare articles which contain these phthalates above the limits specified.

Three of the phthalates (DEHP, DBP and BBP) are not permitted in plasticized material in amounts of more than 0.1% and three other phthalates (DINP, DIDP and DNOP) are not permitted in plasticized material in amounts of more than 0.1% in toys and childcare articles that can be placed into the mouth.

In Denmark there is a stricter legal rule: No phthalates are allowed at all in any product for children from the age of 0-3 years (statutory order no. 786 of 16/07/2006). In a test, a limit of 0.05% must not be exceeded.

Testing laboratory:

Eurofins Product Testing A/S
- Smødeskovvej 38, 8464 Galten, Denmark,
  Phone +45 7022 4276
- Eurofins Air Toxics, Inc.
  - 180 Blue Ravine Road, Ste. B, Folsom, CA 95630, USA,
    Phone +1-800-985-5955

Contact our offices in
- China (Shanghai, Shenzhen) - Denmark - France -
  Germany - Hong Kong - Italy - Netherlands - Thailand -
  UK - USA
via our common email address
voc@eurofins.com
Compliance tests for European and national laws

**EU Toys Directive und EN standards for CE marking**

- **EN 71-1**: Mechanical and physical properties
- **EN 71-2**: Flammability
- **EN 71-3**: Migration of certain elements
- **EN 71-4**: Experimental sets for chemistry and related articles
- **EN 71-5**: Chemical toys (sets) other than experimental sets
- **EN 71-6**: Graphical symbol for age warning labelling
- **EN 71-7**: Finger paints - Requirements and test methods
- **EN 71-8**: Swings, slides and similar activity toys for indoor and outdoor family domestic use
- **EN 71-9**: Organic chemical compounds - Requirements
- **EN 71-10**: Sample preparation and extraction
- **EN 71-11**: Methods of analysis

**REACH and Carcinogenic, mutagenic or toxic for reproduction (CMR) substances**

Toys should comply with REACH legislation and the revised Toy Directive proposes to prohibit the use of CMR substances in all accessible parts of toys.

**Electrical Safety**

- **Azo dyes**: 4-Amino-azo benzene (4-amino-2',3-dimethylazo-benzene), o-azo toluene, 2-aminotoluene (o-toluidine), 2-aminophenol (p-toluene). 3,3'-dimethylbenzidine (o-tolidine), 3,3'-dichlorbenzidine, 3,3'-dimethoxybenzidine, 3,3'-diaminobenzidine (o-tolidine), 3,3'-diaminodiphenylmethane (4,4'-methylenedianiline), 2-naphthylamine, 4,4'-oxydianiline, 4,4'-thiodi-aniline, 2,4,5-trimethylaniline.

**REACH and Carcinogenic, mutagenic or toxic for reproduction (CMR) substances**

- **Heavy metals**: 16/07/2006 All phthalates
- **DNP (di-n-octyl phthalate)**
- **DIDP (di-isodecyl phthalate)**
- **DBP (dibutyl phthalate)**
- **BBP (butyl benzyl phthalate)**
- **BMP (butyl methyl phthalate)**

**Fragrance chemicals**

- **Anisyl alcohol, amyl cinnamal, amyccinnamyl alcohol, benzyl alcohol, benzyl benzoate, benzyl cinnamate, benzyl salicylate, cinnamyl alcohol, cinnamal, citral, citronel- lal, coumarin, eugenol, farnesol, geraniol, hexyl cinnamal-dehyde, hydroxycitronellal, linalol, l-dimethone, linalool, linalyl, linalyl acetate, methyl heptin carbonate, oakmoss and tree-moss extracts.

**Heavy metals**

- **Including**: antimony, arsenic, barium, cadmium, chromium, lead, mercury and selenium.

**Identification of material**

- **X-ray (survey of elements)**
- **GCC/MS screening (survey of organic compounds)**
- **IR (molecular structures)**

**Wireless/Radio**

- **Notified Body for RÁTTE 1999/5/EC**
- **Test Lab**: EN 62209-1, EN 62209-2, EN 62209-3
- **All radio applications e. g. Toy Walkie Talkie, Baby Monitor, model aircraft with remote control**

**Electrical Safety**

- **Identification of material**
- **REACH and Carcinogenic, mutagenic or toxic for reproduction (CMR) substances**
- **Limitation of Phthalates in toys**
- **Fragrance chemicals**
- **Heavy metals**
- **Identification of material**
- **RoHS Directive**
- **The Packaging Waste Directive**
- **Electrical safety**
Compliance tests for European and national laws

EU Toys Directive and EN standards for CE marking

- **EN 71-1**: Mechanical and physical properties
- **EN 71-2**: Flammability
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**REACH and Carcinogenic, mutagenic or toxic for reproduction (CMR) substances**

Toys should comply with REACH legislation and the revised Toy Directive proposes to prohibit the use of CMR substances in all accessible parts of toys.

**Electrical Safety**

Notified Body for LVD 2006/95/EC

Test Lab: EN 62115, EN 61558-2-27, EN 60335-2-20

All electrical powered products with power supply > 50 VAC and 75 VDC e.g. Toy PC, night lamps, toy railway with AC-transformer

**Azo dyes**

4-Amino azo benzene (4-amino-2',3-dimethylazo-benzene), o-aminoazo tolune (4-amino-2,3-dimethylazo-benzene), 4-aminodiphenyl, 2-amino-4-nitrotoluene, benzidine, p-chloroaniline, 4-chloro-o-toluidine, 4,4'-diaminodiphenylmethane (4,4'-methylenedianiline), 2,4-diaminotoluene (2,4-toluylendiamine), 3,3'-dichlorbenzidine, 3,3'-dimethoxybenzidine, 3,3'-dimethylbenzidine (o-tolidine), 3,3'-dimethyl-4,4'-diaminodiphenyl methane, 4,4'-methylene-bis(2-chloraniline), 2-naphthylamine, 4,4'-oxydianiline, 4,4'-thiodi-aniline, 2,4,5-trimethyl aniline.

**Fragrance chemicals**

Anisyl alcohol, amyl cinnamal, amylcinnamyl alcohol, benzyl alcohol, benzyl benzoate, benzyl cinnamate, benzyl salicylate, cinnamyl alcohol, cinnamal, cital, citronellol, coumarin, eugenol, farnesol, geraniol, heptyl cinnamaldehyde, hydrosyringentol, lilial, l-dimethyl, linalool, linalyl, isoeugenol, methyl heptin carbonate, oakmoss and treemoss extracts.

**Heavy metals**

Including: antimony, arsenic, barium, cadmium, chromium, lead, mercury and selenium.

**REACH and Carcinogenic, mutagenic or toxic for reproduction (CMR) substances**

- **EU Toys Directive**: Notified Body for EMC 2004/108/EC
- **Test Lab**: EN 55014-1, EN 55014-2, EN 55022, EN 55024
- **Test Lab**: EN 62115, EN 61558-2-27, EN 60335-2-20
- **Test Lab**: EN 301 489, EN 300 220, EN 300 330
- **Test Lab**: EN 53071, EN 62209-1, EN 62209-2, EN 62311, ANSI C95.1, IEEE 1058, OET Bulletin 85 C
- **Test Lab**: EN 62115, EN 61558-2-27, EN 60335-2-20

All products with clock cycle > 9 kHz e.g. game console, model cars with remote control

**Wireless/Radio**

Notified Body for RTTE 1999/5/EC

Test Lab: EN 62115, EN 61558-2-27, EN 60335-2-20

All radio applications e.g. Toy Walkie Talkie, Baby Monitor, model aircraft with remote control

**Electromagnetic Compatibility (EMC)**

- **Health (SAR)**
- **Test Lab**: EN 53071, EN 62209-1, EN 62209-2, EN 62311, ANSI C95.1, IEEE 1058, OET Bulletin 85 C
- **Test Lab**: EN 62115, EN 61558-2-27, EN 60335-2-20

Every radio product particularly radio device held on head or worn on body e.g. Toy Mobile, Walkie Talkie

**The Packaging Waste Directive**

All packaging - including packaging for toys - is regulated by EU Directive 2002/73/EC.

- **Identification of material**: X-ray (survey of elements)
- **GC/MS screening**: (survey of organic compounds)
- **IR (molecular structures)**

The revised Toy Directive proposes to prohibit certain allergenic substances in all accessible parts of toys.

Today, fragrances in toys are a major focus of attention, as the number of people suffering from allergy to fragrances is rising. Azo dyes are restricted in EU Directive 2002/61/EC on azo colorants.

European Directive 94/62/EC. In Denmark there is a specific regulation (statutory order no. 477 of 28/05/2006). The content of the metals cadmium, lead, chromium VI and mercury must be documented to be under the limit values – no matter whether the packaging is made of plastic, cardboard, paper, textile or other material.

**European EMC Directive 2004/108/EC**

Electromagnetic Compatibility (EMC) is the ability of systems, equipment and devices to utilize the electromagnetic spectrum to operate in their intended operational environments without suffering unacceptable degradation or causing unintentional degradation through electromagnetic radiation or response.

**Regulations for wireless products**

To avoid interference of wireless products there are regulations established in the worldwide markets. There is a distinction between compliance with international regulations (e.g. ETSI, FCC, IC…) and compliance with independent program requirements (e.g. Bluetooth, WLAN…).

**Safety**

Electric toys and other electrically operated products intended for use by children can be extremely hazardous if improperly used, used without supervision, or not properly designed and/or constructed. The possible dangers are many: electric shock, burns, especially if the product has a heating element; and a wide variety of mechanical hazards common to toys in general, such as sharp edges and points and dangerous moving parts.
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Contact our offices in
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via our common email address

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- Phone +1-800-985-5955