



Printing Inks and Related Products for the Manufacture of Toys

EuPIA Position Statement

1. The EU Toy Safety Directive 2009/48/EC

All toys marketed in the EU must comply with the requirements of the Toy Safety Directive 2009/48/EC. National laws as well as the European Toys Standard EN 71 "Safety of Toys" have been modified to comply with the directive. The directive has in the meantime been amended several times, and the national laws and European standard revised accordingly.

The directive focuses on enhanced safety requirements for toys, particularly with regard to the chemicals present. Substances classified as carcinogenic, mutagenic or toxic for reproduction (CMR) of category 1A, 1B or 2 under Regulation (EC) No 1272/2008 shall not be used. The use of certain allergenic fragrances is restricted, and limits for the migration of 19 metallic elements from toys have been set.

The migration limits set by the directive apply when it is used as intended or in a foreseeable way, unless the toy or component clearly excludes any hazard due to sucking, licking, swallowing, or prolonged contact with skin. Packaging materials - unless having an intended play value - are also excluded.

Several types of printing inks and related products supplied by EuPIA members can be used in the toy supply chain, e.g. for toy decoration, as well as for printing of children's books.

EuPIA members do not use the elements, or compounds of, antimony, arsenic, cadmium, chromium (VI), lead, mercury, and selenium, substances classified as acutely toxic cat. 1-3, nor substances classified as carcinogenic, mutagenic, or toxic for reproduction cat. 1A or 1B according to Regulation (EC) No 1272/2008 in the manufacture of inks and related products. All these are excluded from use in printing inks by the EuPIA Exclusion Policy.

For particular technical and performance reasons, EuPIA members might use substances classified as carcinogenic, mutagenic or toxic for reproduction (CMR) cat. 2 in the manufacture of certain specific inks and related products when these are below the relevant concentration limits for classification, as per Annex II, section III point 5 (a) of the directive.

Apart from these excluded materials, other elements included in the directive may be present in inks, notably copper, zinc, or aluminium (which form the basis for certain blue, green, and metallic inks), or manganese (which may be present as driers in oxidative drying sheet-fed litho inks).



2. European Standard EN 71 "Safety of Toys"

The harmonised standard EN 71 - Part 3 "Migration of Certain Elements" was revised in 2013, and last amended on 16 October 2019.

EN 71 - Part 3 sets the requirements and the test methods for the migration of 19 elements from toys materials and from parts of toys.

Printing inks and varnishes are not toys in themselves. Rules for printed toy materials are specified in section 7.3.3.3. Packaging for toys is not in scope, unless it also has intended play value. Compliance with the migration limits must be determined by testing the scraped-off ink and/or varnish layer or, if it is not possible to scrape off this layer (e.g. in the case of paper or board), by testing the printed toy material. The cat. III migration limits (for scraped-off toy materials) apply in both cases.

As stated in the EuPIA "Exclusion Policy for Printing Inks and Related Products", pigment colorants based on, and compounds of, the elements antimony, arsenic, cadmium, chromium (VI), lead, mercury, and selenium are not used in the manufacture of printing inks.

Other elements with limits in EN 71 - Part 3 may be used in the manufacture of printing inks, for example barium lake red pigments. EuPIA members take care to only use barium lake red pigments with low extractable barium content.

Since the limit for aluminium was lowered in 2019, printed silver ink layers (containing metallic aluminium as the pigment) may exceed the limit, depending on coverage. .

As suppliers of printing inks and related products, EuPIA members cannot take responsibility for the handling and use of their products outside their own operations. As EN 71 - Part 3 relates to the properties of the finished toy, not the ink as supplied to the printer, it is the responsibility of the toy manufacturer to demonstrate the compliance of the finished toy.

EuPIA printing ink manufacturers will recommend specific inks for the manufacture of toys or packaging materials with intended play value, and will give specific declarations for the use and suitability of these inks, including declarations on further restricted elements, notably copper, zinc, aluminium, and manganese.

Further parts of EN 71 (Parts 9 - 11), which deal with the risks from organic chemicals, have so far not yet been adopted or revised by the European Commission. In any case, printing inks as well as printing ink films would not be in scope of these standards, as exposure to organic chemicals from coatings below 500 µm thickness is not regarded as relevant in EN 71 - Parts 9 - 11. The thickness of a printed ink film is typically below 50 µm, hence information on organic chemicals in inks is not required by manufacturers or marketers of printed toys and therefore will not be provided by EuPIA members.

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