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**Safety of toys —**

**Part 6:**

**Certain phthalate esters in toys and  
children's products**

*Sécurité des jouets —*

*Partie 6: Dosage de certains esters de phtalates dans les jouets et  
produits pour enfants*





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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 181, *Safety of toys*.

This second edition of ISO 8124-6 cancels and replaces the first edition (ISO 8124-6:2014), which has been technically revised.

The main changes to the previous edition are as follows:

- addition of di-*iso*-butyl phthalate (DIBP) in [Clause 1](#) and [Annex A](#);
- addition of liquid material in [Clause 1](#), [Clause 7](#) and [Annex A](#);
- addition of a new [Clause 2](#), *Normative references*, and renumbering of subsequent clauses;
- addition of a new method C, “ultrasonic bath method”;
- update and reorganization of the inter-laboratory collaborative trial test data in [Annex B](#);
- addition of a new [Annex E](#), *Ultrasonic bath performance check*, and renumbering of all annexes.

A list of all parts in the ISO 8124 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).



## Introduction

This document is largely based upon the existing Chinese national standard GB/T 22048-2008. Relevant standards of some countries and regions are referred to as well.

This document does not set out limits for phthalate esters. It is intended to be used as a method standard in conformity assessment. The user of this document is therefore advised to be aware of relevant national requirements.

In some countries phthalate ester requirements for toys are also applicable to children's products and children's product materials are generally similar to those of toys. This document, whose scope covers various materials, is therefore applicable to both toys and children's products.

[Annex A](#) and [Annex E](#) are normative, whereas [Annex B](#), [Annex C](#), [Annex D](#), [Annex F](#) and [Annex G](#) are for information only. However, they are crucial and helpful for the correct interpretation of this document.







# Safety of toys —

## Part 6:

# Certain phthalate esters in toys and children's products

**WARNING** — Persons using this document should be familiar with normal laboratory practice. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices.

**IMPORTANT** — It is absolutely essential that tests conducted in accordance with this document be carried out by suitably trained staff.

## 1 Scope

This document specifies a method for the determination of di-*iso*-butyl phthalate (DIBP), di-*n*-butyl phthalate (DBP), benzylbutyl phthalate (BBP), bis-(2-ethylhexyl) phthalate (DEHP), di-*n*-octyl phthalate (DNOP), di-*iso*-nonylphthalate (DINP) and di-*iso*-decyl phthalate (DIDP) (as specified in [Annex A](#)) in toys and children's products.

This document is applicable to toys and children's products which are made of plastics, textiles, coatings and liquids. This document has been validated for polyvinylchloride (PVC) plastics, polyurethane (PU) plastics and some representative paint coatings (see [Annex B](#)). It might also be applicable to other phthalate esters and other product materials provided that adequate validation is demonstrated.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 2758, *Paper — Determination of bursting strength*

ISO 8124-1:2018, *Safety of toys — Part 1: Safety aspects related to mechanical and physical properties*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### 3.1

#### **laboratory sample**

toy or children's product in the form in which it is marketed or intended to be marketed

### 3.2

#### **base material**

material upon which coatings may be formed or deposited

[SOURCE: ISO 8124-3:2010, 3.1]