
Safety of toys —
Part 6:
Certain phthalate esters

Sécurité des jouets —

Partie 6: Certains esters de phtalates



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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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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.

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

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

This third edition cancels and replaces the second edition (ISO 8124-6:2018), which has been technically revised.

The main changes are as follows:

- removal of “children’s products” from the title, scope and other parts of this document;
- addition of new definitions for instrument detection limit (3.9) and action limit in (3.11);
- replacement of “4 °C” with “0 °C to 8 °C” in 5.3, 5.4, 5.5.2 and 5.5.3;
- addition of the composite test in 7.3 and 9.2;
- addition of the maximum total mass of composite test portions for the composite test in 8.2.2;
- addition of a clean-up procedure in 8.4.1;
- the volume of the final solution adjusted from 1 ml to 50 ml in 8.4.2.1, 8.4.2.2.1 and 8.4.2.2.2;
- addition of the composite test mathematic model in Annex D;
- addition of a list including other phthalate esters in G.2.

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.

Introduction

This document does not determine the limits for certain 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 other product categories with materials similar to those of toys. The scope of this document covers various materials used in toys and other product categories.

[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 correctly interpreting this document.

Safety of toys —

Part 6: Certain phthalate esters

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 should be carried out by suitably trained staff.

1 Scope

This document specifies a method standard for the determination of di-*iso*-butyl phthalate (DIBP), di-*n*-butyl phthalate (DBP), benzyl-butyl phthalate (BBP), bis-(2-ethylhexyl) phthalate (DEHP), di-*n*-octyl phthalate (DNOP), di-*iso*-nonyl phthalate (DINP) and di-*iso*-decyl phthalate (DIDP) in toys. It can also be applied to other phthalate esters (see [G.2](#)) if adequate validation is demonstrated.

This document applies to toys made of plastics, textiles, coatings and liquids. This document has been validated for polyvinylchloride (PVC) and polyurethane (PU) plastics and some representative paint coatings (see [Annex B](#)).

This document can also be applied to other product categories.

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 8124-1:2022, *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 terminology databases for use in standardization at the following addresses:

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

3.1

laboratory sample

toy in the form in which it is marketed or intended to be marketed

3.2

base material

material upon which *coatings* ([3.3](#)) may be formed or deposited

[SOURCE: ISO 8124-3:2020, 3.1]