INTERNATIONAL STANDARD

ISO 16245

Second edition
2023-04

Information and documentation — Boxes, file covers and other enclosures, made from cellulosic materials, for storage of paper and parchment documents

Information et documentation — Boîtes, sous-chemises et autres contenants en matériaux cellulosiques, pour le stockage des documents sur papier et parchemin

Reference number
ISO 16245:2023(E)

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Published in Switzerland

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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).

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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 46, *Information and documentation*, Subcommittee SC 10, *Requirements for document storage and conditions for preservation*.

This second edition cancels and replaces the first edition (ISO 16245:2009), which has been technically revised.

The main changes are as follows:

— ISO 23404 has been added as a normative reference, and an acceptance limit based on tests carried out in accordance with ISO 23404 has been determined;

— the bleeding test procedure has been improved;

— the different types of boards used for making boxes, file covers and other enclosures have been defined.

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.

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Introduction

Boxes, file covers and other enclosures are available in several different materials. Those made of cellulosic materials are the most commonly used enclosures for long-term storage of paper and parchment documents. Experience has shown that properties of the enclosure are of great importance to the protection, permanence and durability of the documents. This document specifies a number of basic requirements relevant to the material composition and construction of cellulose based boxes, file covers and other enclosures.

The purpose of boxes, file covers and other enclosures is to hold and contain documents in prescribed order or grouping, to provide a protective container, and to facilitate identification, transport and storage. Preferably, the same file covers and boxes can be used from storage at the place of work to the final archive storage. Moreover, it is possible to transport, handle and lend a related collection of documents as a unit.

Boxes, through their design and construction, protect documents from environmental risks such as light, rapid temperature and moisture changes and dust, as well as from damage related to handling. File covers and folders further protect documents by enclosing them with materials specified for their preservation qualities. However, even high-quality file covers, folders and boxes cannot compensate for poor storage conditions.

This document can be used as a specification. It can also be incorporated as an element into other specifications, used in trade, or in other national or International Standards for more specialized purposes.

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Information and documentation — Boxes, file covers and other enclosures, made from cellulosic materials, for storage of paper and parchment documents

1 Scope

This document specifies requirements for boxes, file covers and other enclosures made of cellulosic material, to be used for long term storage of documents on paper or parchment.

This document is applicable to boxes made of solid or corrugated board and to file covers and other enclosures made of paper or board.

This document can also be applicable to other types of enclosures for long term storage such as cases, portfolios, tubes and envelopes made of cellulosic material.

This document is not applicable to storage of photographic materials.

NOTE ISO 18902 contains requirements on storage materials for photographs.

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 5-3, *Photography and graphic technology — Density measurements — Part 3: Spectral conditions*

ISO 5-4, *Photography and graphic technology — Density measurements — Part 4: Geometric conditions for reflection density*

ISO 302, *Pulps — Determination of Kappa number*

ISO 535, *Paper and board — Determination of water absorptiveness — Cobb method*

ISO 536, *Paper and board — Determination of grammage*

ISO 4046-4, *Paper, board, pulps and related terms — Vocabulary — Part 4: Paper and board grades and converted products*

ISO 5626:1993, *Paper — Determination of folding endurance*

ISO 6588-1, *Paper, board and pulps — Determination of pH of aqueous extracts — Part 1: Cold extraction*

ISO 10716, *Paper and board — Determination of alkali reserve*

ISO/CIE 11664-2, *Colorimetry — Part 2: CIE standard illuminants*

ISO 12048:1994, *Packaging — Complete, filled transport packages — Compression and stacking tests using a compression tester*

ISO 23404, *Information and documentation — Papers and boards used for conservation — Measurement of impact of volatiles on cellulose in paper*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4046-4 and the following 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
box
storage container intended to protect documents and facilitate their shelving and handling

3.2
file cover
enclosure made of a sheet of paper or board used for housing of and as a separating agent for document(s)

3.3
folder
sheet of heavy paper stock or cardboard, scored near the middle, its halves bent so they rest side by side, and used as a loose cover to keep documents and other flat materials together, especially for purposes of filing

[SOURCE: SAA Glossary https://dictionary.archivists.org]

3.4
viscosity-average degree of polymerization
DP_v
average number of anhydroglucose units (monomers of cellulose) in the cellulose macromolecule, determined by measuring the viscosity of solutions in cupri-ethylenediamine (CED)

[SOURCE: ISO/TS 18344:2016, 3.3, modified — "Viscosity" has been added to the term, and the determination process has been added to the definition.]

3.5
loss of DP_v
ωDP_v
arithmetic mean of the DP_v (3.4) of an exposed sample of reference paper against the DP_v of an unexposed sample of same paper

[SOURCE: ISO 23404:2020, 3.7, modified — "Viscosity average degree of polymerization" has been replaced by DP_v]

3.6
alkali reserve
compound, such as calcium carbonate, that neutralizes acid that can be generated as a result of natural aging or from atmospheric pollution

[SOURCE: ISO 9706:1994]

3.7
homogenous single-layer board
board comprising a single furnish layer

Note 1 to entry: This definition is equivalent to a solid board as defined by ISO 4046-4:2016, 4.49.

Note 2 to entry: The term single-ply board can also be used instead of single-layer board.

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