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Furniture — Storage units — Test methods for the determination of strength, durability and stability

Ameublement — Éléments de rangement — Méthodes d'essai pour la détermination de la résistance, de la durabilité et de la stabilité

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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).

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).

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 136, *Furniture*.

This third edition cancels and replaces the second edition (ISO 7170:2005), which has been technically revised, and ISO 7171:2019, which has been merged into this document.

The main changes compared to the previous edition are as follows:

— addition of the Introduction;

— normative reference ISO 48-5:2018 replaces ISO 7619-2:2010;

— deletion of the pneumatic slamming apparatus for slam open and slam shut tests of extension elements;

— introduction of sideward detachment tests for units mounted to the building or other structure;

— introduction of a stability test for units with doors, extension elements and flaps, opened and unlocked with storage areas partly loaded;

— introduction of definitions, figures and additional an stability test method for units intended to support a TV-set;

— revision of the guidance for the choice of loads, cycles, etc. for strength, durability and stability testing in Annex A;

— loads and forces for different applications have been merged in Annex B.

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 has been developed with the objective of promoting relevant test methods for determining the strength, durability and stability of storage furniture, simulating normal functional use, as well as foreseeable misuse, that might reasonably be expected to occur. The tests are designed to evaluate properties without regard to materials, design/construction or manufacturing processes and intended to demonstrate the ability of the item to give satisfactory service in its intended environment.

The test results are only valid for the unit/component tested. These results can be used to represent the performance of production models prior to use, provided that the tested unit/component is representative of the production model. Only when properly justified, they can be used for failure analysis of a unit that has been in use.

The strength and durability tests do not assess the structure of the building, e.g. the strength of wall hanging cabinets includes only the cabinet and the parts used for the attachment. The wall and the attachment into the wall are not included.

Assessment of ageing and environmental degradation is not included.

Furniture — Storage units — Test methods for the determination of strength, durability and stability

1 Scope

This document specifies test methods for determining the strength, durability and stability of storage units, when fully assembled prior to use, including their movable and non-movable parts.

Acceptance criteria for the strength, durability and stability of the storage furniture is not specified by the test methods. Instead, suggested loads, cycles and forces are provided in Annex B, depending on the applicability of the furniture.

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 48-5:2018, *Rubber, vulcanized or thermoplastic — Determination of hardness — Part 5: Indentation hardness by IRHD pocket meter method*

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 https://www.electropedia.org/

3.1
adjustable friction stay
component (3.7) to hold open a door or a *flap* (3.13) with a feature that keeps the door or flap open without any further assistance at a multitude of positions

3.2
bracket
rigid device to prevent overturning

Note 1 to entry: Normally made of metal; not a flexible device such as strap or cable tie.

3.3
built-in stop
device of the *component* (3.7) that limits the travel of *extension element* (3.12) or doors

3.4
catch device
device that keeps or pulls a *component* (3.7) in place but does not require a second action in order to release it

EXAMPLE A magnetic catch or a self-closing-mechanism.