International Standard

ISO 4918

Resilient, textile, laminate and modular mechanical locked floor coverings — Castor chair test

Revêtement de sol textiles, résilients, stratifiés ou modulaire à verrouillage mécanique — Essai à l'appareil à roulettes

Third edition
2026-11

Sample Document
get full document from standards.iteh.ai

Reference number
ISO 4918:2026(en)

© ISO 2026

Sample Document

get full document from standards.iteh.ai



COPYRIGHT PROTECTED DOCUMENT

© ISO 2026

All rights reserved.

This ISO publication is protected by copyright and is owned by ISO and/or its licensors.

The content of this ISO publication is provided under licence, not sold. Use is subject to the applicable licence terms issued by ISO, an ISO member body, or an authorized third-party distributor.

Except as required for implementation or expressly permitted by a separate licence, no part of this ISO publication may be reproduced, distributed, modified, used, or made available in any form or by any means – electronic or mechanical, including photocopying, scanning, recording, or posting on internal or external digital platforms.

Any use beyond the scope of the granted rights is prohibited and may result in legal action.

ISO copyright office
CP 401 • CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

ISO 4918:2026 • https://standards.iteh.ai/catalog/standards/iso/c41ad888-d31c-4445-ac7e-550ecf130117/iso-4918-2026

Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Principle ... **2**

5 Apparatus ... **2**

6 Materials ... **6**

7 Sampling ... **7**
7.1 Textile floor coverings ... 7
7.2 Resilient floor coverings without mechanical locking system ... 7
7.3 Resilient, laminate and modular mechanical locked floor coverings with mechanical locking systems ... 8

8 Conditioning ... **10**
8.1 Textile floor coverings ... 10
8.2 Resilient, laminate and modular mechanical locked floor coverings ... 10

9 Procedure ... **10**
9.1 Textile floor coverings ... 10
9.1.1 General ... 10
9.1.2 Mounting of the specimens ... 10
9.1.3 Verifications of the castors ... 10
9.1.4 Preparing of the apparatus ... 10
9.1.5 Test procedures ... 10
9.2 Resilient, laminate and modular mechanical locked floor coverings ... 12
9.2.1 General ... 12
9.2.2 Mounting of the specimen(s) ... 12
9.2.3 Verification of the castors ... 13
9.2.4 Preparing the apparatus ... 13
9.2.5 Test procedure ... 15

10 Assessment ... **15**
10.1 Textile floor coverings ... 15
10.1.1 General ... 15
10.1.2 Test A — Structural integrity assessment ... 16
10.1.3 Test A — Appearance retention assessment ... 16
10.1.4 Test B — Colour change assessment ... 16
10.1.5 Test C — Structural integrity assessment ... 16
10.2 Resilient, laminate and modular mechanical locked floor coverings ... 17

11 Calculations and expression of results ... **17**
11.1 Textile floor coverings ... 17
11.1.1 General ... 17
11.1.2 Castor index ... 17
11.2 Resilient, laminate and modular mechanical locked floor coverings ... 17

12 Test report ... **17**
12.1 General ... 17
12.2 Textile floor coverings ... 18
12.3 Resilient, laminate and modular mechanical locked floor coverings ... 18

Annex A (informative) ... **19**

Sample Document
Full document from standards.iteh.ai

© ISO 2026 – All rights reserved

ISO 4918:2026 • https://standards.iteh.ai/catalog/standards/iso/c41ad888-d31c-4445-ac7e-550ecf130117/iso-4918-2026

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 not 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.

Sample Document

This document was prepared by Technical Committee ISO/TC 219, *Floor coverings*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 134, *Resilient, textile, laminate and modular mechanical locked floor coverings,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

get full document from standards.iteh.ai

This third edition cancels and replaces the second edition (ISO 4918:2016/Amd 1:2018), which has been technically revised.

The main changes are as follows:

— revision of information regarding the machine;

— revision of information regarding the fastening methods;

— addition of methods for testing modular mechanical locked floor coverings (MMF).

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.

© ISO 2026 – All rights reserved

ISO 4918:2026 • https://standards.iteh.ai/catalog/standards/iso/c41ad888-d31c-4445-ac7e-550ecf130117/iso-4918-2026

Resilient, textile, laminate and modular mechanical locked floor coverings — Castor chair test

1 Scope

This document specifies methods for determining the change of appearance and stability of textile floor coverings or any damage caused by detachment of layers, opening of joints, cracks, or crazing of resilient, laminate or modular mechanical locked floor coverings under the movement of a swivel castor chair.

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 139:2005/AMD1:2011, *Textiles — Standard atmospheres for conditioning and testing*

ISO 1957, *Machine-made textile floor coverings — Selection and cutting of specimens for physical tests*

ISO 2424, *Textile floor coverings — Vocabulary*

ISO 9405, *Textile floor coverings — Assessment of changes in appearance*

EN 12466, *Resilient floor coverings — Vocabulary*

EN 12529, *Castors and wheels — Castors for furniture — Castors for swivel chairs — Requirements*

EN 16511, *Modular mechanical locked floor coverings (MMF) — Specification, requirements and test method for multilayer modular panels for floating installation*

ASTM D7330, *Standard Test Method for Assessment of Surface Appearance Change in Pile Floor Coverings Using Standard Reference Scales*

Sample Document
get full document from standards.iteh.ai

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 2424, EN 16511, EN 12466 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
crazing
fine random cracks apparent in the surface of floor coverings

Note 1 to entry: Crazing is generally caused by an applied stress acting on the surface.

Note 1 to entry: Applied stress can include, for example, sustained exposure to a rolling load.

© ISO 2026 – All rights reserved

ISO 4918:2026 • https://standards.iteh.ai/catalog/standards/iso/c41ad888-d31c-4445-ac7e-550ecf130117/iso-4918-2026

4 Principle

A floor covering comprising one or more individual pieces with or without joint and treated or welded where necessary, is submitted for a prescribed number of cycles to the action of three castors. The castors move in epicyclical paths with multiple changes of direction, stops and starts, and the frequency of passage varies from area to area.

For textile floor coverings, three different assessment methods are specified.

a) The change in appearance shall be assessed after 5 000 cycles and 25 000 cycles in accordance with ISO 9405 (Test A) or ASTM D7330.

b) The change in colour shall be assessed by means of grey scales after 750 cycles in accordance with ISO 9405 (Test B) or ASTM D7330.

c) The extent of deterioration shall be assessed after 10 000 cycles or 25 000 cycles (Test C).

For resilient, laminate or modular mechanical locked floor coverings, any damage to the specimen caused during testing and visible as detachment of layers, opening of joints, cracking or crazing shall be assessed.

5 Apparatus

5.1 Rotating test platform

The rotating test platform on which the test specimen or the specimen support (5.9) together with the test specimen is placed shall have a diameter of at least 795 mm (circular platform) or platform with a length and width of at least 1 000 mm (square platform).

Sample Document

5.2 Castor assembly

get full document from standards.iteh.ai

This assembly comprises a vertical shaft, set in a bearing, and a plate on which the castors are mounted (see Figure 1, item 1). This castor assembly is offset at a distance of (198 ± 1) mm from the centre of the rotating test platform.

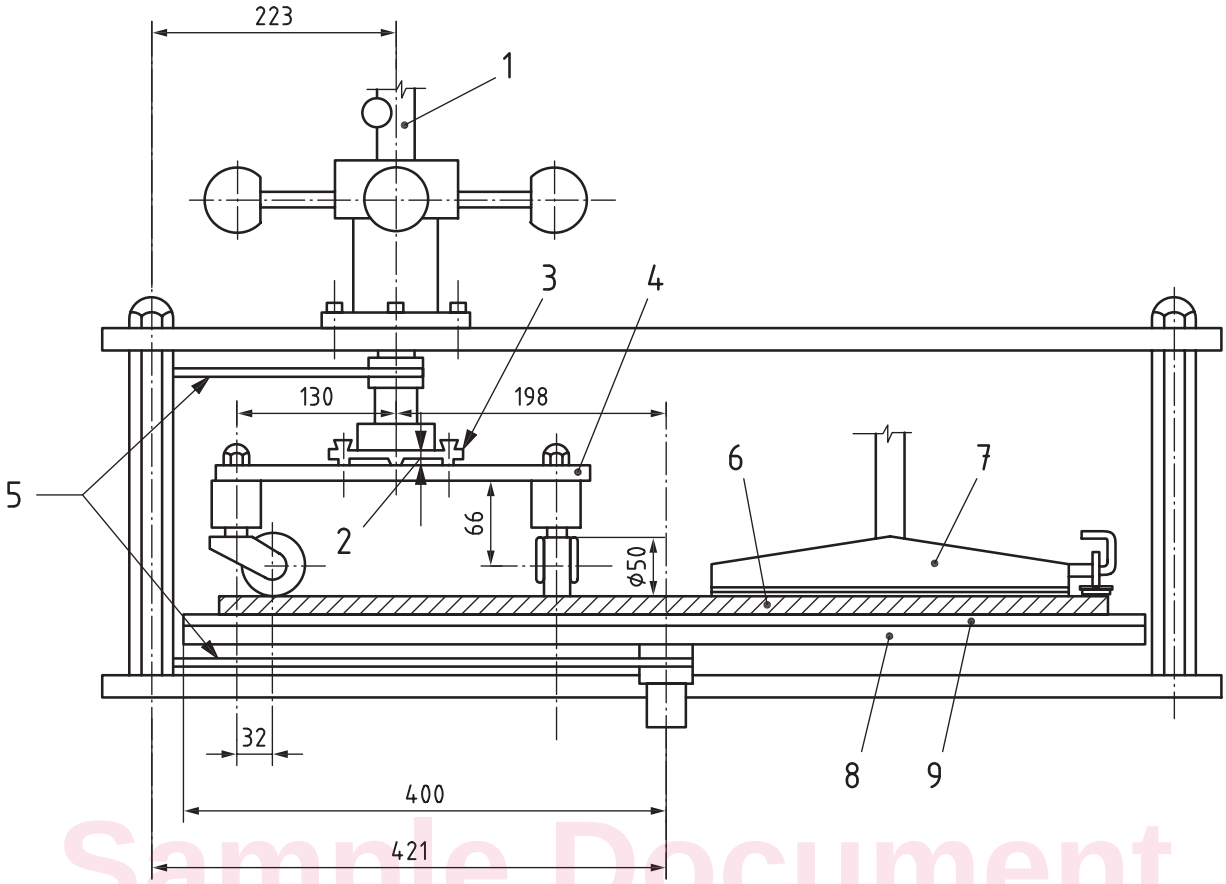
The three castors are each arranged concentrically at 120° intervals around the centre of the plate at a distance of (130 ± 1) mm from the centre of the plate, and are free to rotate, so that they follow the rotation of the castor assembly.

The tested area of the specimen is determined by the distance between the axes of revolution of the castor chair assembly and the specimen table and by the distance of the castors from the centre of the plate. This area is approximately 0,3 m^2.

© ISO 2026 – All rights reserved

ISO 4918:2026 • https://standards.iteh.ai/catalog/standards/iso/c41ad888-d31c-4445-ac7e-550ecf130117/iso-4918-2026

Dimensions in millimetres



Sample Document
Get full document from standards.iteh.ai

Key

1	shaft
2	distance >3 mm
3	load and or drive plate
4	castor mounting plate
5	chain
6	specimen
7	suction device with height regulation
8	rotating test platform
9	specimen support

Figure 1 — Typical castor chair apparatus

The castor assembly is loaded with additional weights to achieve a total load of (90 ± 2) kg equally divided over the three castors.

The distance (under load) between the castor mounting plate and either the load or drive plate, or both, shall be >3 mm.

© ISO 2026 – All rights reserved

ISO 4918:2026 • https://standards.iteh.ai/catalog/standards/iso/c41ad888-d31c-4445-ac7e-550ecf130117/iso-4918-2026