

Pohištvo za domačo uporabo - Sedežno pohištvo – Preskusne metode za ugotavljanje trajnosti oblazinjenja

Domestic furniture - Seating - Test methods for the determination of durability of upholstery

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST ENV 14443:2004](https://standards.iteh.ai/catalog/standards/sist/ec9678c6-0e4b-4398-83f0-384f01967388/sist-env-14443-2004)

<https://standards.iteh.ai/catalog/standards/sist/ec9678c6-0e4b-4398-83f0-384f01967388/sist-env-14443-2004>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST ENV 14443:2004

<https://standards.iteh.ai/catalog/standards/sist/ec9678c6-0e4b-4398-83f0-384f01967388/sist-env-14443-2004>

ICS 97.140

English version

Domestic furniture - Seating - Test methods for the
determination of durability of upholstery

Meubles à usage domestique - Sièges - Méthodes d'essai
pour la détermination de la durabilité du rembourrage

Möbel für den Wohnbereich - Polstermöbel - Prüfverfahren
zur Bestimmung der Dauerhaltbarkeit der Sitzpolsterung
am Möbel

This European Prestandard (ENV) was approved by CEN on 2 January 2004 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

[SIST ENV 14443:2004](https://standards.iteh.ai/catalog/standards/sist/ec9678c6-0e4b-4398-83f0-384f01967388/sist-env-14443-2004)

<https://standards.iteh.ai/catalog/standards/sist/ec9678c6-0e4b-4398-83f0-384f01967388/sist-env-14443-2004>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

page

Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions.....	5
4 General test conditions	6
4.1 Preliminary preparation.....	6
4.2 Tolerances	6
4.3 Sequence of testing	6
5 Test equipment	7
5.1 Floor surface	7
5.2 Stops	7
5.3 Loading pad.....	7
5.4 Equipment for recording the load/deflection curves.	7
6 Test methods.....	7
6.1 General.....	7
6.1.1 Cushions with loose fillings	8
6.2 Durability test	8
6.3 Load/deflection curve.....	9
7 Evaluation of characteristic parameters.....	9
7.1 Determination of height loss	9
7.2 Determination of hardness value	9
8 Test report	11
Annex A (informative) Test method for testing the interaction of upholstery components.....	12
A.1 Test equipment	12
A.2 Test procedure	12
A.3 Inspection	12

ITeH STANDARD PREVIEW
 (standards.iteh.ai)

SIST ENV 14443:2004
<http://standards.iteh.ai/catalog/standards/sist/ec9678c6-0e4b-4398-83f0-384f01967388/sist-env-14443-2004>

Foreword

This document (ENV 14443:2004) has been prepared by Technical Committee CEN/TC 207 "Furniture", the secretariat of which is held by UNI.

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST ENV 14443:2004

<https://standards.iteh.ai/catalog/standards/sist/ec9678c6-0e4b-4398-83f0-384f01967388/sist-env-14443-2004>

Introduction

This European test method has been developed in order that laboratories and manufacturers can carry out testing of upholstered seating in the same manner so that test results may be compared.

It has been the intention to include an annex with test methods for textiles and leather, but suitable CEN standards are not yet available.

This European Prestandard does not include test methods for arms and backs of upholstered furniture. During the ENV period (3 years) member countries are asked to investigate into the need for such test methods and if needed to submit proposals for the future revision.

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST ENV 14443:2004

<https://standards.iteh.ai/catalog/standards/sist/ec9678c6-0e4b-4398-83f0-384f01967388/sist-env-14443-2004>

1 Scope

This European Prestandard specifies a test method for the determination of durability of upholstery complete and on the seating.

Test methods are specified for seat durability and for the determination of hardness and height loss.

It does not apply to the strength and durability of the structure of the seating, which is covered by EN 1728.

The effect of temperature and moisture are not included.

Annex A (informative) includes a test method for testing the interaction between the cover and the underlying upholstery as well as the interaction between the seat and back upholstery.

2 Normative references

This European Prestandard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Prestandard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

EN 1728 *Domestic furniture – Seating – Test methods for the determination of strength and durability.*

ISO 1101 *Technical drawings - Geometrical tolerancing - Tolerancing of form, orientation, location and run-out - Generalities, definitions, symbols, indications on drawings.*

[SIST ENV 14443:2004](https://standards.iteh.ai/catalog/standards/sist/ec9678c6-0e4b-4398-83f0-384f01967388/sist-env-14443-2004)

3 Terms and definitions

For the purposes of this European Prestandard the following terms and definitions apply.

3.1

upholstery

all materials used for covering the structure, e.g. leather, textiles and other cover materials as well as wadding, foam materials, fibre materials, springs, suspensions, and cushions

3.2

durability test

test simulating the repeated application of loads occurring during long term use and intended to reproduce the change of the properties of the test unit caused by repeated loadings

3.3

load/deflection curve

curve obtained by pressing a loading pad into the test unit and measuring the associated values of indentation and force simultaneously

3.4

hardness value (H)

value in N/mm determined from the load/deflection curve

3.5

seat upholstery reference height

height of the seat upholstery top surface from a fixed datum under specified conditions

3.6

height loss

change in the upholstery height caused by the seat durability test (cf. EN 1728)

4 General test conditions

4.1 Preliminary preparation

Before any of the tests are commenced, the test unit shall be old enough to ensure that it has developed its full strength.

The test unit shall be tested as delivered. Knock-down furniture shall be assembled according to the instructions supplied with it. If the test unit can be assembled in different ways, the most adverse combination shall be used. Knock-down fittings shall be tightened before testing, if applicable.

Further tightening shall not take place unless this is specifically required by the manufacturer.

The test unit shall be stored in indoor ambient conditions for at least one week immediately prior to testing. Any deviation from this procedure shall be stated in the test report.

The tests shall be carried out in indoor conditions but if during a test the atmospheric temperature is outside the range 15°C to 25°C, the maximum and/or minimum temperature shall be recorded in the test report.

If necessary, with the exception of the test in annex A, cushions shall be prevented from moving during testing by a suitable means, e.g. adhesive tape or needles.

4.2 Tolerances

Unless otherwise stated:

- all forces and velocities shall have an accuracy of $\pm 5\%$,
- all masses an accuracy of $\pm 0,5\%$ and
- all dimensions an accuracy of ± 1 mm.

The tolerance for positioning of loading pads shall be ± 5 mm.

4.3 Sequence of testing

The tests shall be carried out in the sequence laid down in this prestandard. All tests shall be carried out on the same test unit.

5 Test equipment

5.1 Floor surface

Rigid, horizontal and flat.

5.2 Stops

Stops shall be used to prevent the test unit from sliding but not tilting and shall be no higher than 12 mm except in cases where the design of the unit necessitates the use of higher stops; in which case the lowest that will prevent the test unit from moving, shall be used.

5.3 Loading pad

The loading pad shall have a smooth surface with a spherical radius of 800 mm and a diameter of 300 mm and shall be mounted to the loading system of the test equipment by a ball joint as close as possible to the loading surface.

The shape of the loading pad shall be contained in a form tolerance zone according to ISO 1101 of 1 mm. The diameter of the loading pad shall not vary from the nominal dimension by more than ± 2 mm.

5.4 Equipment for recording the load/deflection curves.

The equipment for recording the load/deflection curves shall be a loading pad (5.3) and a testing machine capable of applying a vertical downward load up to 1000 N.

The travel speed for both loading and unloading shall be (90 ± 5) mm/minute.

Load and height with reference to a fixed datum shall be recorded simultaneously.

The accuracy of the height measuring system shall be $\pm 0,5$ mm.

The accuracy of the load measuring system shall be 1 % of the maximum load (1000 N).

6 Test methods

6.1 General

6.1.1 Introduction

All tests and measurements shall be carried out on the complete unit standing on the floor surface (5.1).

The unit shall be inspected before and after the durability test (6.2) in order to detect changes caused by the test.

Special attention shall be given to noise, tears in seams, seam splits, displacement or lumpiness in filling materials, broken springs, protrusion of the springs as well as holes and tears in the seat inflicted by the durability test. Any internal inspection shall be carried out only at the end of the test and after all measurements have been taken.

In the case of designs not catered for in the test procedures, the test shall be carried out as far as possible as described and the deviations shall be stated in the test report.