SLOVENSKI STANDARD
SIST-TP CEN/TR 17538:2020

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Pohištvo - Skupna preskusna oprema - Preskusne pene in posteljni vložki

Furniture - Common test equipment - Test foams and mattresses

Möbel - Gängige Prüfeinrichtungen - Prüfschäume und Prüfmatratzen

Ameublement - Équipement d'essai courant - Mousses et matelas d'essai

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Furniture - Common test equipment - Test foams and mattresses

Ameublement - Équipement d'essai courant - Mousses et matelas d'essai

Möbel - Gängige Prüfeinrichtungen - Prüfschäume und Prüfmatratzen

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European foreword

This document (CEN/TR 17538:2020) has been prepared by Technical Committee CEN/TC 207 “Furniture”, the secretariat of which is held by UNI.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Introduction

This document is a non-normative CEN publication which provides guidance information on the most current specifications for common test foams and test mattresses for consideration when developing safety standards for furniture.

This document has been drawn up by a working group of experts set up by CEN/TC 207 with the prime objective of harmonizing the test equipment used when testing furniture.

The information given in these guidelines reflects the state of the art at publication. Standards and regulations will continuously be developed.

How to use this guideline

The recommendations are intended to give guidance and to lead to consistency when writing standards for furniture. It is recommended to use these guidelines when drafting standards.

The recommendations detailed do not constitute an exhaustive set of test equipment that can be applied to all furniture products. The application to particular products should be evaluated by experts.

1 Scope

This document contains suggested requirements for commonly used test mattresses and test foams specified in test method standards for furniture.

The document contains guidance that may be used by standards developers to ensure test equipment is consistent throughout furniture test standards.

The document contains guidance that may be used by test laboratories to provide a consistent source of test equipment when new standards are developed or older standards are revised.

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.

EN ISO 2439, *Flexible cellular polymeric materials - Determination of hardness (indentation technique) (ISO 2439)*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

4 Test equipment

4.1 Tolerances

Unless otherwise stated the following tolerances should apply:

— masses: ± 1 % of the nominal mass;

— dimensions: all dimensions less than 300 mm shall have a tolerance of ± 1 mm of the nominal dimension, all other dimensions shall have a tolerance of ± 0,5 % of the nominal dimension.

4.2 Test mattresses

4.2.1 Adult test mattress

4.2.1.1 General

A foam sheet with a thickness of 100 mm, a bulk density of (35 ± 5) kg/m^3 and an indentation hardness index of (170 ± 40) N $HA_{(40\ \%/30s)}$ in accordance with EN ISO 2439.

The mattress should be at least 700 mm x 700 mm.

The test mattress may have a cover, in which case it should have the following characteristics:

— composition: 100 % cotton;

— mass per unit area: 120 ± 20 g/m^2;

— cover make up: tight fit, but with no restrictions on the foam.

NOTE This mattress can be suitable for products featuring a full size adult bed base including beds for adults, foldaway beds and bunk beds.

4.2.1.2 Recommended usage

The same part of the test mattress should not be re-used within 30 min of completing a test. The mattress should be replaced if damaged, or in any case after 30 complete bed tests, unless it can be demonstrated that the mattress specification has not been degraded.

4.2.2 Children's test mattress

4.2.2.1 General

A flexible foam sheet with a thickness of 60 mm, a bulk density of (35 ± 5) kg/m^3 and an indentation hardness index of (170 ± 40) N $HA_{(40\ \%/30s)}$ in accordance with EN ISO 2439.

The mattress should be at least 400 mm x 800 mm, but not larger than the bed base of the product being tested.

The test mattress may have a cover, in which case it should have the following characteristics:

— composition: 100 % cotton;

— mass per unit area: 120 ± 20 g/m^2;

— cover make up: tight fit, but with no restrictions on the foam.

NOTE This mattress can be suitable for products featuring a bed base for children, such as cots.

4.2.2.2 Recommended usage

The same part of the test mattress shall not be re-used within 30 min of completing a test. The mattress shall be replaced if damaged, or after 30 complete bed tests, unless it can be demonstrated that the mattress specification has not been degraded.

4.3 Test foams

4.3.1 Standard test foam

A foam sheet with a thickness of 25 mm and a bulk density of (120 ± 25) kg/m^3.

NOTE When the foam is used with loading pads it is attached to the loading pads or alternatively positioned between the loading pad and the test structure.

4.3.2 Test foam for glass

A foam sheet with a thickness of 100 mm, a bulk density of (35 ± 5) kg/m^3 and an indentation hardness index of (170 ± 40) N $HA_{(40\ \%/30s)}$ in accordance with EN ISO 2439.

4.3.3 Recommended usage

The test foam should not be re-used within 30 min of completing a test. The test foam should be replaced if damaged, in contact with broken glass, or in any case after 100 impact tests, unless it can be demonstrated that the foam specification has not been degraded.