



BSI Standards Publication

**Furniture — Common test equipment —
Test foams and mattresses**

National foreword

This Published Document is the UK implementation of CEN/TR 17538:2020.

The UK participation in its preparation was entrusted to Technical Committee FW/0/1, Common Test Methods for Furniture.

A list of organizations represented on this committee can be obtained on request to its committee manager.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2020
Published by BSI Standards Limited 2020

ISBN 978 0 539 12490 3

ICS 97.140

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 September 2020.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

TECHNICAL REPORT

CEN/TR 17538

RAPPORT TECHNIQUE

TECHNISCHER BERICHT

September 2020

ICS 97.140

English Version

**Furniture - Common test equipment - Test foams and
mattresses**Ameublement - Équipement d'essai courant - Mousses
et matelas d'essaiMöbel - Gängige Prüfeinrichtungen - Prüfschäume und
Prüfmatratzen

This Technical Report was approved by CEN on 24 August 2020. It has been drawn up by the Technical Committee CEN/TC 207.

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



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents		Page
European foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Test equipment	5
4.1	Tolerances	5
4.2	Test mattresses	5
4.2.1	Adult test mattress	5
4.2.2	Children’s test mattress	6
4.3	Test foams	6
4.3.1	Standard test foam	6
4.3.2	Test foam for glass	6
4.3.3	Recommended usage	6

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 $\pm 0,5$ % 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/m³ 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/m²;
- cover make up: tight fit, but with no restrictions on the foam.