
Tekstilije - Gorljivost posteljnine - 3.del: Splošne metode preskušanja vnetljivosti z majhnim odprtim plamenom (ISO 12952-3:1998)

Textiles - Burning behaviour of bedding items - Part 3: General test methods for the ignitability by a small open flame (ISO 12952-3:1998)

Textilien - Brennverhalten von Bettzeug - Teil 3: Allgemeines Prüfverfahren für die Entzündbarkeit durch eine kleine offene Flamme (ISO 12952-3:1998)

Textiles - Comportement au feu des articles de literie - Partie 3: Méthodes d'essai générales pour l'allumabilité par une petite flamme nue (ISO 12952-3:1998)

[https://standards.iteh.ai/catalog/standards/sist/d8584050-9d44-4a47-](https://standards.iteh.ai/catalog/standards/sist/d8584050-9d44-4a47-8495-3ae6c37414e8/sist-en-iso-12952-3-1999)

Ta slovenski standard je istoveten z: EN ISO 12952-3:1998

ICS:

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
97.160	Tekstilije za dom. Perilo	Home textiles. Linen

SIST EN ISO 12952-3:1999**en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 12952-3:1999

<https://standards.iteh.ai/catalog/standards/sist/d8584050-9d44-4a47-8495-3ae6c37414e8/sist-en-iso-12952-3-1999>

EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM

EN ISO 12952-3

December 1998

ICS 13.220.00; 97.160

Descriptors: textiles, textile products, bedding, fire tests, roasting tests, flames, general

English version

Textiles - Burning behaviour of bedding items - Part 3: General
 test methods for the ignitability by a small open flame (ISO
 12952-3:1998)

Textiles - Comportement au feu des articles de literie -
 Partie 3: Méthodes d'essai générales pour l'allumabilité par
 une petite flamme nue (ISO 12952-3:1998)

Textilien - Brennverhalten von Bettzeug - Teil 3:
 Allgemeines Prüfverfahren für die Entzündbarkeit durch
 eine kleine offene Flamme (ISO 12952-3:1998)

This European Standard was approved by CEN on 24 October 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

	Page
Foreword	3
Introduction	3
1 Scope	4
2 Normative references	4
3 Definitions	4
4 Principle	4
5 Criteria of ignition	5
6 Health and safety of operators	5
7 Apparatus	5
8 Cleaning	8
9 Atmospheres for conditioning and testing	8
10 Test specimens	8
11 Test procedures	9
12 Final examination	10
13 Test report	10
Annex A (informative) Preferred test report layout	11
Annex B (informative) Gas flow control recommended	12

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 12952-3:1999](https://standards.iteh.ai/catalog/standards/sist/d8584050-9d44-4a47-8495-3ae6c37414e8/sist-en-iso-12952-3-1999)

<https://standards.iteh.ai/catalog/standards/sist/d8584050-9d44-4a47-8495-3ae6c37414e8/sist-en-iso-12952-3-1999>



INTERNATIONAL ORGANIZATION OF STANDARDS
ISO
11 rue de la Voie Lactée, CP 318
CH-1211 Geneva 20, Switzerland
Tel: +41 (0)22 717 0411
Fax: +41 (0)22 717 0412
www.iso.org

Foreword

The text of EN ISO 12952-3:1998 has been prepared by Technical Committee CEN/TC 248 "Textiles and textile products", the secretariat of which is held by BSI, in collaboration with Technical Committee ISO/TC 38 "Textiles".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 1999, and conflicting national standards shall be withdrawn at the latest by June 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Fires are sometimes caused by the ignition of bedding items by smokers' materials; the ignitability of bedding items by a smouldering cigarette or a small open flame is therefore an important feature in the assessment of the risk of fire.

It cannot be assumed that protection against a smouldering ignition source will automatically give protection against flaming ignition. Users of this standard should, thus, consider the need to submit test specimens to both cigarette and flaming ignition tests.

EN ISO 12952-1 and EN ISO 12952-2 describe a method of test with the smouldering cigarette as ignition source. Testing against the ignition source of a small open flame forms the contents of EN ISO 12952-3 and EN ISO 12952-4.

This European Standard can be used for the assessment of ignitability of individual items of bedding and of composite arrangements.

EN ISO 12952-1 and EN ISO 12952-3 describe general testing procedure and aspects of testing common to all bedding items; EN ISO 12952-2 and EN ISO 12952-4 contain all details necessary for the testing of the specific bedding items.

WARNING: This test relates only to the ignitability of materials under the particular conditions of test. It is not intended as a means of assessing the full potential fire hazard of the bedding item in use.

Particular attention is drawn to the possibility of ignition of lower parts of a bedding assembly when using bedding items which are not themselves ignited.

1 Scope

This European Standard specifies a general test method common to all bedding items, for assessment of their ignitability when subjected to a smouldering cigarette.

EN ISO 12952-4 describes a specific test method for bedding items, which can normally be placed on a mattress, for example:

- mattress covers;
- underlays;
- incontinence-sheets and -pads;
- sheets;
- blankets;
- electric blankets;
- quilts (duvets) and covers;
- pillows (whatever the filling) and bolsters;
- pillowcases.

This standard does not apply to mattresses, bed-bases and mattress pads.

2 Normative references

This European Standard 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 draft European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN ISO 12952-1	https://standards.iteh.ai/catalog/standards/sist/d8584050-9d44-4a47-8495-3a2007914-burning-behaviour-of-bedding-items Textiles - Burning behaviour of bedding items - Part 1: General test methods for the ignitability by a smouldering cigarette (ISO 12952-1:1998)
EN ISO 12952-4	Textiles - Burning behaviour of bedding items - Part 4: Specific test methods for the ignitability by a small open flame (ISO 12952-4:1998)
EN ISO 3175	Textiles - Evaluation of stability to machine dry-cleaning (ISO 3175:1995)
ISO 26330	Textiles - Domestic washing and drying procedures for textile testing (ISO 6330:1984)
ISO/IEC GUIDE 52	Glossary of fire terms and definitions

3 Definitions

For the purposes of this standard, the definitions given in EN ISO 12952-1 apply.

4 Principle

A test specimen placed on a testing substrate is subjected to a small open flame placed on top of and/or below the test specimen (see EN ISO 12952-4). Any progressive smouldering and/or flaming is noted.

Where the actual mattress is known, it can replace the testing substrate.

5 Criteria of ignition

5.1 Progressive smouldering ignition

All the following types of behaviour given in a) to d) are considered to be progressive smouldering ignition:

- a) any test specimen that displays escalating combustion behaviour so that it is unsafe to continue the test and requires forcible extinction;
- b) any test specimen that smoulders until it is essentially consumed within the test duration;
- c) any test specimen that produces externally detectable amounts of smoke, heat or glowing after a period of 15 min following the removal of the ignition source;
- d) any test specimen that, on final examination, shows evidence of smouldering other than discolouration more than 100 mm in any horizontal direction from the nearest part of the original position of the ignition source.

NOTE: In practice, it has been found that there is usually a clear distinction between materials which char under the influence of an ignition source but which do not propagate further (non-progressive) and those where smouldering develops and spreads (progressive).

5.2 Flaming ignition

iTeh STANDARD PREVIEW
(standards.iteh.ai)

The following type of behaviour is considered to be flaming ignition:

- a) any test specimen that displays escalating combustion behaviour so that it is unsafe to continue the test and requires forcible extinction;
- b) any test specimen that continues to flame for more than 120 s after removal of the ignition source.

6 Health and safety of operators

There is considerable risk with these tests and it is essential that suitable precautions be taken, which can include the provision of breathing apparatus and protective clothing.

6.1 Enclosure

For safety, the tests shall be conducted in a suitable fume cupboard or purpose-built room so that individuals are not exposed to any fumes (see 7.4).

6.2 Extinguishers

Readily accessible suitable means of extinguishing the test specimens shall be provided. Extinction of test specimens can be difficult and care should be taken that they are only disposed of when completely inert. It can be necessary to immerse smouldering specimens in water, or place them in a sealed non-combustible enclosure. To ensure complete safety other suitable steps can be required.

7 Apparatus

7.1 Test rig

A suitable test rig is illustrated in figure 1. It consists of a platform of open mesh (400 ± 50) mm supported by a solid base. The test rig shall correspond to the dimensions of the test specimen, but can be larger than the test specimen.

The size of the mesh is not critical, nor are the angle iron dimensions given in figure 1.

For the tests, the rig is placed within the test enclosure (see 7.4).

7.2 Clock

A stop clock reading to the nearest second and capable of measuring for at least 1 h.

7.3 Ignition source: propane gas flame

A burner tube consisting of stainless steel of $(8,0 \pm 0,1)$ mm outside diameter, $(6,5 \pm 0,1)$ mm internal diameter and (200 ± 5) mm in length, is connected by flexible tubing via a flowmeter, fine control valve, on-off valve and cylinder regulator providing an outlet pressure of nominal $2,8 \text{ kPa}^{1)}$ to a cylinder providing commercial propane.

The flowmeter shall be calibrated to supply a propane gas flow rate at 25°C of nominally (45 ± 1) ml/min. The flexible tubing connecting the output of the flowmeter to the burner tube shall be 2,5 m to 3 m in length (see annex B).

NOTE: Under these conditions the flame height is approximately 35 mm.

7.4 Test enclosure

A suitable room with volume greater than 20 m^3 , which contains adequate oxygen for testing, or a smaller enclosure with a throughflow of air equipped with inlet and extraction systems. Air flow rates shall not exceed 0,2 m/s in the locality of the test specimen position. This limit provides adequate oxygen without disturbing the burning behaviour.

7.5 Testing substrate

The testing substrate, which is used to simulate the mattress, over which the bedding items are tested, shall be a mineral wool fibre pad having a thermal conductivity of 0,04 W/m.K.

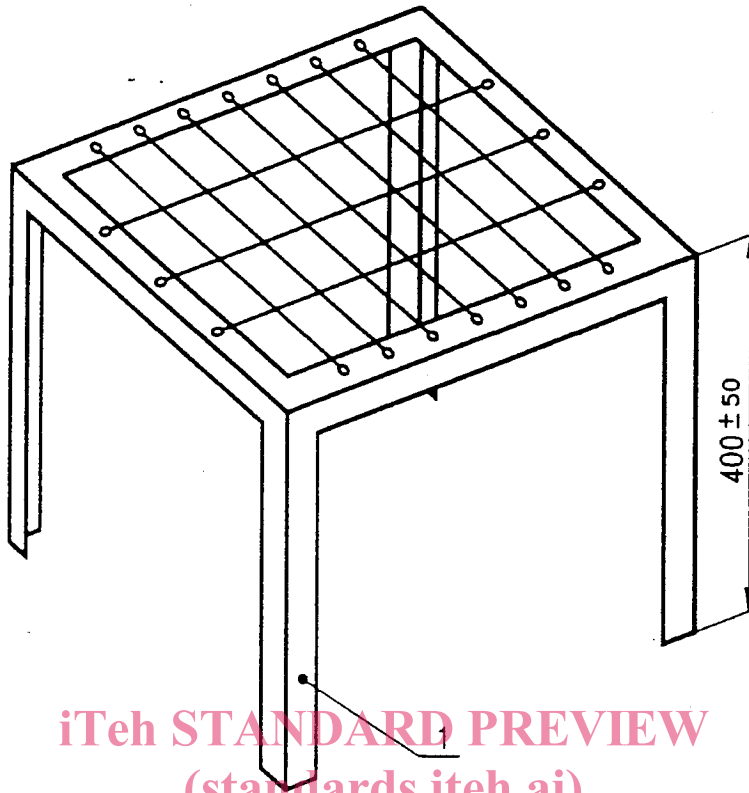
The nominal dimensions of the testing substrate are 450 mm x 450 mm x 25 mm thickness (see figure 2).

iTeh STANDARD PREVIEW
(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/8495-3ac6c37414e8/sist-en-iso-12952-3-1999>

¹⁾ 1 kPa = 1000 N/m² = 10 mbar

Dimensions in millimetres



iTeh STANDARD PREVIEW
(standards.iteh.ai)

1) Nominal 25x25x3 angle iron

SIST EN ISO 12952-3:1999

<https://standards.iteh.ai/catalog/standards/sist/d8584050-9d44-4a47-8495-3ac6c37414e8/sist-en-iso-12952-3-1999>

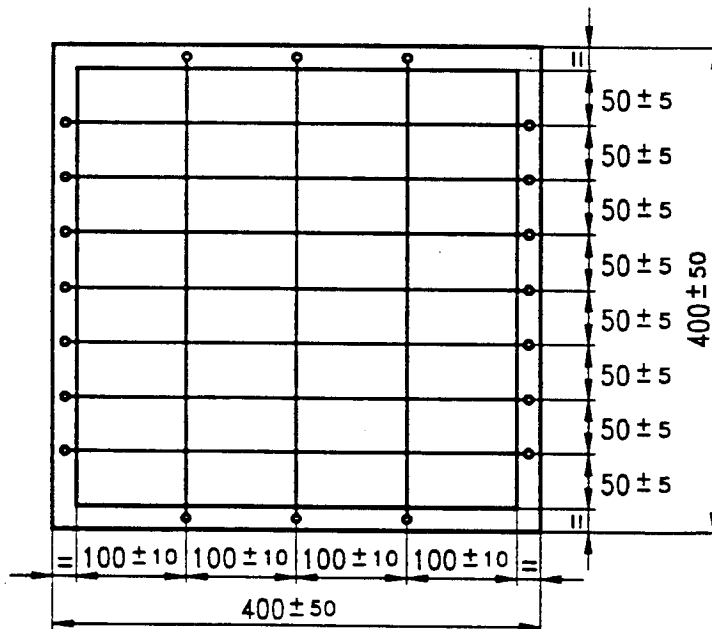


Figure 1 : Test rig