

Textiles — Burning behaviour of bedding items —

Part 4: Specific test methods for the ignitability by a small open flame

The European Standard EN ISO 12952-4:1998 has the status of a
British Standard

ICS 13.220.40; 97.160

National foreword

This British Standard is the English language version of EN ISO 12952-4:1998. It is identical with ISO 12952-4:1998.

The UK participation in its preparation was entrusted to Technical Committee TCI/63, Burning behaviour of textiles, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

BS 7175:1989 (1994) *Methods of test for the ignitability of bedcovers and pillows by smouldering and flaming ignition sources*, is being amended to remove any conflict with this standard. BS 7175 remains valid for methods of test with ignition sources between 2 and 7.

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

Cross-references

Attention is drawn to the fact that CEN and CENELEC Standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Find" facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN ISO title page, pages 2 to 7 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

This British Standard, having been prepared under the direction of the Sector Committee for Materials and Chemicals, was published under the authority of the Standards Committee and comes into effect on 15 May 1999

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Amendments issued since publication

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English version

**Textiles — Burning behaviour of bedding items —
Part 4: Specific test methods for the ignitability by
a small open flame**

(ISO 12952-4:1998)

Textiles — Comportement au feu des articles de literie — Partie 4: Méthodes d'essai spécifiques pour l'allumabilité par une petite flamme nue (ISO 12952-4:1998)

Textilien — Brennverhalten von Bettzeug — Teil 4: Spezifische Prüfverfahren für die Entzündbarkeit durch eine kleine offene Flamme (ISO 12952-4:1998)

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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

Foreword

The text of EN ISO 12952-4:1998 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.

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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 test method 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 may 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.

As EN ISO 12952-3 and EN ISO 12952-4 complement each other, EN ISO 12952-2 cannot be used without also considering the general aspects of the test method given in EN ISO 12952-3.

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 product-specific details concerning specimen size, wash procedures, set-up of specimens and positions of the ignition source for testing bedding items according to the method described in EN ISO 12952-3.

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

EN ISO 3175, *Textiles — Evaluation of stability test methods to machine drycleaning.* (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 Testing of individual bedding items

3.1 Test specimen

Flat materials shall be cut to (450 × 450) mm.

For pillows the test specimen shall be a full-sized item.

Bolsters shall be cut to a maximum length of 450 mm.

Quilts and duvets shall be cut to (450 × 450) mm (edges should be sealed if necessary). The test specimens shall include two original edges.

3.2 Cleaning procedures

Bedding items that are regularly cleaned in use shall be tested after five cleaning cycles, unless a higher number is specified.

Cleaning should be carried out in agreement with the method specified by the producer. If no method has been specified, the product shall be washed in accordance with method 2A of ISO 26330 and specimens shall not be dried between wash cycles.

If dry-cleaning is specified, use EN ISO 3175.

3.3 Set-up of test specimens and positions of ignition source

3.3.1 Positioning of the ignition source

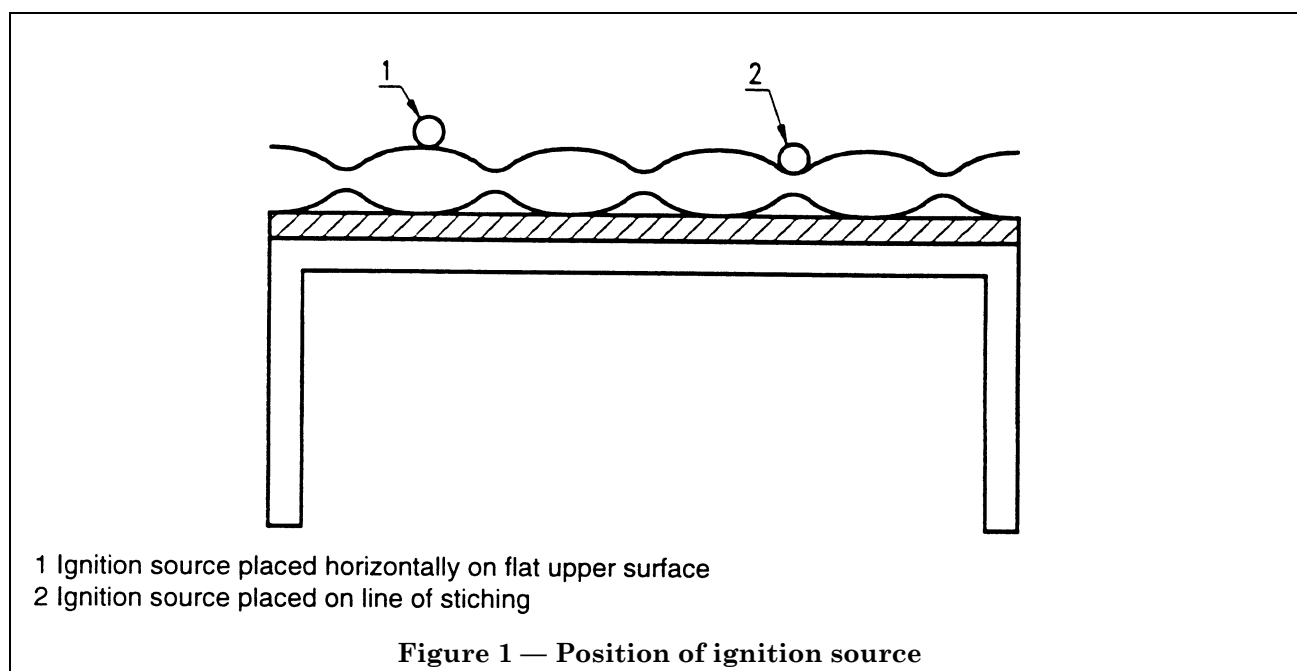
The burner tube shall be held horizontally and shall be brought into contact with the surface of the test specimen, without any pressure and without releasing it.

3.3.2 Flat bedding items

The test specimen shall be placed flat on the test rig with the testing substrate. Place the ignition source flat on top the test specimen. The position of the ignition source shall be at least 100 mm away from the edges of the specimen and at least 200 mm away from any marks left by any previous test.

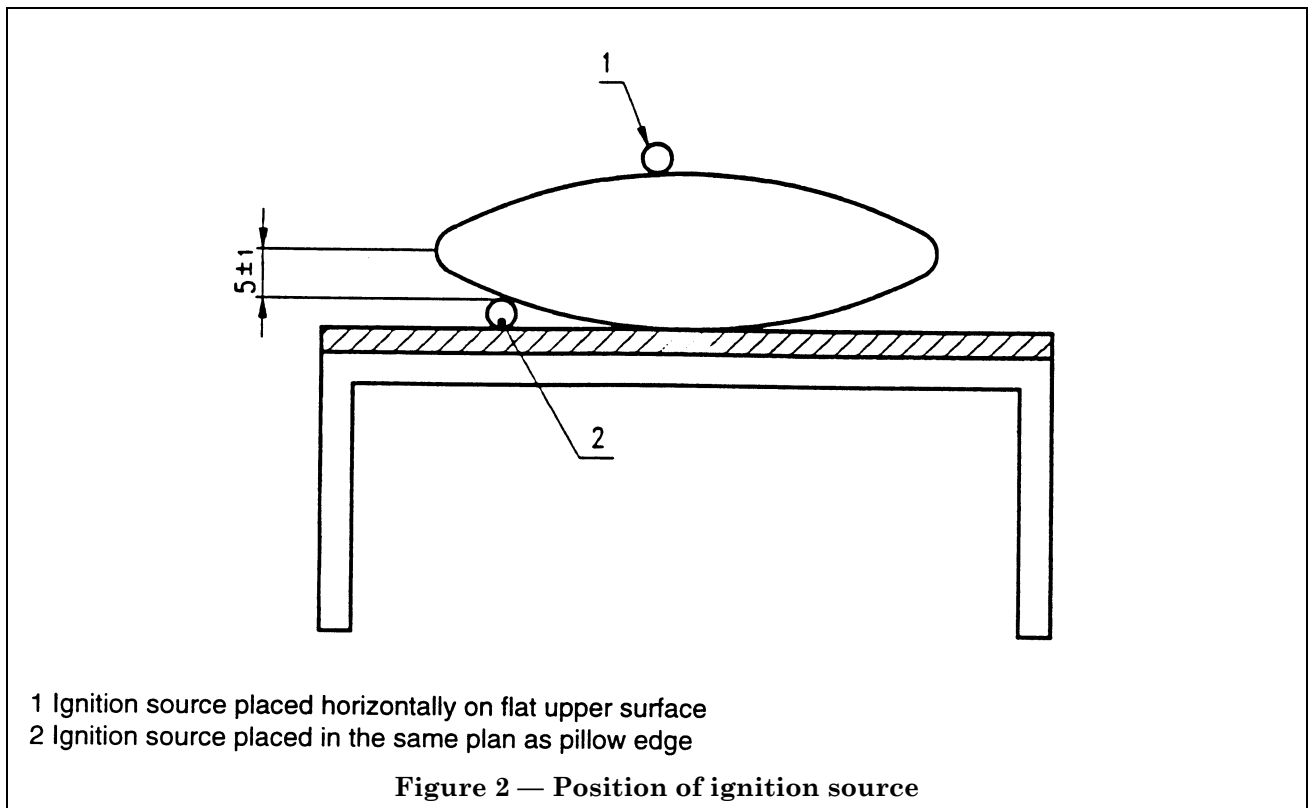
3.3.3 Quilts

Place the test specimen flat on the test rig with the testing substrate. Place the ignition source horizontally on top of the flat part of the quilt, at least 100 mm away from the edges. Carry out an additional test with the ignition source placed along the line of stitching on top of the test specimen (see Figure 1). In repeat tests, place the ignition source at least 200 mm away from any mark left from any previous test.



3.3.4 Pillows/Bolsters

The test specimen shall be placed flat on the test rig with the testing substrate. The ignition source shall be placed horizontally on the flat upper surface of the test specimen. An additional test shall be carried out with the ignition source placed horizontally (5 ± 1) mm below the specimen edge and with the centreline of the ignition source in the same plane as the test specimen edge (see Figure 2).



3.3.5 Duvets

The test specimen shall be tested like a pillow. For the test with the ignition source below the test specimen, the test specimen edge shall be an original one.

4 Testing of complete composites or of combinations of bedding items

4.1 Applicability

In cases where more than one or all bedding items are known, they shall be tested together because of possible interactions of the ignitability of the individual items. The relative positions of the individual items to each other during testing shall represent as closely as possible the actual set-up of the composite.

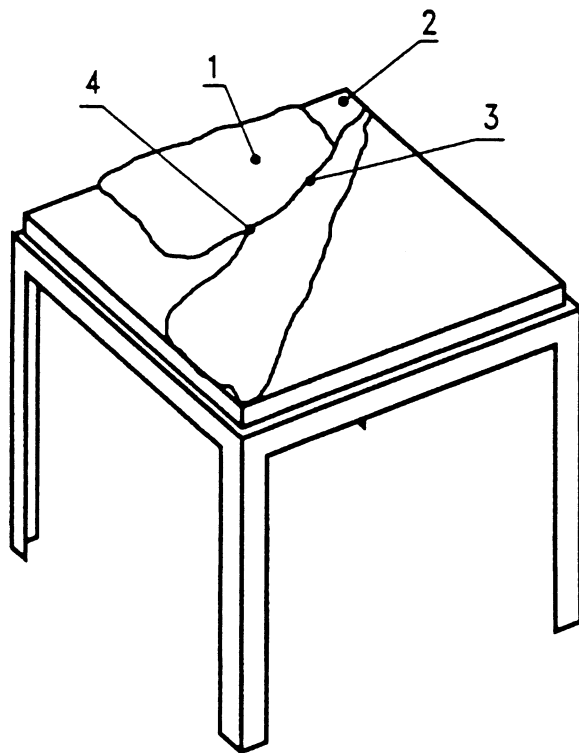
4.2 Set-up of testing composite arrangement

4.2.1 Dimensions of component test specimens making up the testing composite arrangement

Test specimens shall be cut from the components in the same way and to the same size as when testing them individually. Pillows and duvets shall be reduced to a size of (225 × 225) mm.

4.2.2 Positions of component test specimens and of ignition source

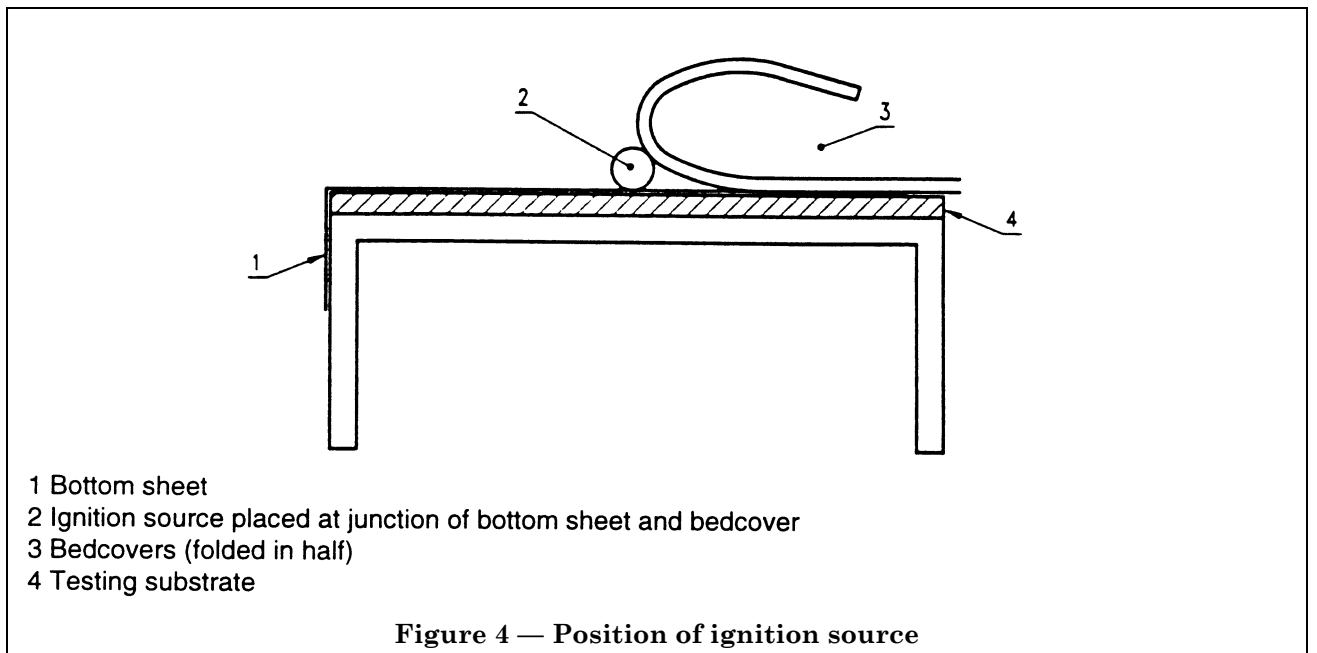
When a pillow (or bolster) and bed covers (blanket, quilt, duvet) are placed over the bottom sheet, incontinence sheet (if applicable) and mattress cover, the ignition source shall be placed centrally at the junction of pillow, bottom sheet and bed covers. The bed covers shall be folded back at an angle of approximately 30° (see Figure 3). The burner tube shall be held horizontally and shall be brought into contact with the surface of the test specimens at the position shown in Figure 3, without any pressure and without releasing it.



- 1 Pillow (half-scale size)
- 2 Bottom sheet in position
- 3 Top bed covers folded back at an angle of approximately 30°
- 4 Ignition source placed centrally at junction between bottom sheet and folded back top bed covers

Figure 3 — Position of ignition source

When combinations of components are tested without a pillow, the ignition source shall be placed at the junction of the bottom sheet and the bed cover (see Figure 4).



When no pillow or bed covers are used, the combination of the bottom sheet with any underlying sheet shall be tested as in 3.3.2.

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