

BRITISH STANDARD

Fabrics for curtains, drapes and window blinds –

Part 2: Flammability requirements – Specification

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Summary of pages

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Foreword

Publishing information

This part of BS 5867 is published by BSI and came into effect on 30 May 2008. It was prepared by Technical Committee TCI/66, *Apparel and interior textiles*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This part of BS 5867 supersedes BS 5867-2:1980, which is withdrawn.

Relationship with other publications

While a consumer is likely to be interested primarily in such properties as colour fastness and dimensional stability, fire safety advisers might be interested primarily in the flammability aspects of a product. For this reason the standard is divided into two parts:

- *Part 1 General requirements;*
- *Part 2 Flammability requirements.*

Either part can be used individually or both parts can be used together, though it is stressed that a fabric conforming only to the requirements of Part 2 might not be satisfactory for use as a curtain fabric.

Information about this document

A fabric conforming to the requirements of this standard does not always withstand exposure to large sources of heat, but it would have some resistance to flame spread following accidental contact with small sources of ignition.

The flammability requirements given in this part of BS 5867 have been selected after careful consideration of the statistical information concerning hazard to life in those incidents where curtains and drapes have been identified as the material first ignited.

Three sets of performance requirements have been included so that the most important one can be selected for a specific end use.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Requirements in this standard are drafted in accordance with *The BSI guide to standardization – Section 2: Rules for the structure, drafting and presentation of British Standards*, subclause **11.3.1**, which states, “Requirements should be expressed using wording such as: ‘When tested as described in Annex A, the product shall ...’”. This means that only those products that are capable of passing the specified test will be deemed to conform to this standard.

Contractual and legal considerations

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

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

1 Scope

This part of BS 5867 specifies flammability requirements for fabrics and fabric assemblies for use in the production of non-domestic curtains, drapes and window blinds and for finished articles including combinations of curtains and linings when tested by the methods specified in BS EN ISO 6941 and BS EN ISO 15025.

Fabrics are tested before any cleansing procedure, to assess them in the form in which they are most commonly used.

The procedures specified in BS EN ISO 10528, BS EN 1021-1 and BS 5651 provide suitable methods of cleansing or wetting.

Where curtains or drapes are to be produced in a multi-layer fabric construction, it is essential to test the fabrics in the combination in which they are to be used.

2 Normative references

The following referenced documents are indispensable for the application 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.

BS 5651, *Method for cleansing and wetting procedures for use in the assessment of the effect of cleansing and wetting on the flammability of textile fabrics and fabric assemblies*

BS EN 1021-1:2006, *Furniture – Assessment of the ignitability of upholstered furniture – Part 1: Ignition source smouldering cigarette*

BS EN ISO 3758, *Textiles – Care labelling code using symbols*

BS EN ISO 6941:2003, *Textile fabrics – Burning behaviour – Measurement of flame spread properties of vertically oriented specimens*

BS EN ISO 10528, *Textiles – Commercial laundering procedure for textile fabrics prior to flammability testing*

BS EN ISO 15025:2002, *Protective clothing – Protection against heat and flame – Method of test for limited flame spread*

3 Terms and definitions

For the purposes of this part of BS 5867, the following terms and definitions apply.

3.1 afterflame

persistence of flaming of a material, under specified test conditions, after the ignition source has been removed

3.2 afterflame time

length of time for which a material continues to flame under specified test conditions, after the ignition source has been removed

NOTE Also called “duration of flame”.

3.3 afterglow

persistence of glowing of a material, under specified test conditions, after cessation of flaming or, if no flaming occurs, after removal of the ignition source

3.4 afterglow time

time for which the material continues to glow, under specified test conditions, after cessation of flaming, or if no flaming occurs after the removal of the ignition source

NOTE Also called "duration of afterglow".

3.5 batch

definite quantity of material produced at one time under conditions that are presumed uniform

NOTE For the purposes of this standard, if different process routes are followed, or different base fabrics used, the resultant fabrics can be regarded as being from different batches.

4 Sampling

A sample shall be taken of sufficient size to provide the required test specimens from each finishing batch or from at least every 5 000 m.

NOTE 1 If testing is required at intervals at less than 5 000 m it should be agreed between the purchaser and the supplier.

Retesting shall be carried out where there is any major alteration to a fabric specification, e.g. of fibre content, flame retardant finish or mass per unit area of fabric; or change of materials manufacturer.

NOTE 2 Changes in the colour (where the fabric was flame retardant finished in the same batch) of the fabric or minor changes in the pattern or weave, e.g. of the order of 2 picks/cm, is not sufficient reason to necessitate retesting.

5 Durability

All fabrics shall be tested without any cleansing procedure. The sample shall also be submitted to the appropriate cleansing or wetting procedure specified in BS EN ISO 10528, BS EN 1021-1 or BS 5651, depending on the specified performance or the information given on the care of the fabric (e.g. on the care label).

Durability to commercial laundry processes shall be demonstrated by satisfactory testing after being subjected to 12 cycles of standard washing in accordance with BS EN ISO 10528.

Durability to dry cleaning processes shall be demonstrated by satisfactory testing after being subjected to a water soak as specified in BS EN 1021-1:2006, Annex D and 6 cycles of dry cleaning according to BS 5651.

If the fabric is to be labelled as being unsuitable for cleansing by any method (e.g. disposable products could be so described), the water soaking procedure specified in BS EN 1021-1:2006, Annex D shall be carried out.

In certain cases non-durable finishes might be employed to meet the performance requirements of Clause 6, these shall not be subject to cleansing. However, if such non-durable finishes are used, the fabric shall be clearly labelled as follows:

WARNING: IF WETTED IN ANY WAY IT IS ESSENTIAL TO RE-TREAT THE FABRIC TO MEET FLAMMABILITY REQUIREMENTS; or:

WARNING: WETTING IN ANY WAY MIGHT REMOVE THE FIRE RESISTING QUALITIES OF THE FABRIC.

6 Test procedures and requirements

6.1 General

A set of performance requirements as specified in 6.2, 6.3, or 6.4 shall be selected as appropriate for the specified end use.

NOTE Under the Regulatory Reform (Fire Safety) Order 2005 [1] the choice of performance and durability requirements is a decision to be made by the nominated responsible person accountable for the fire safety of the premises and its contents.

6.2 Type “A” performance requirements

6.2.1 All fabrics shall be tested prior to any cleansing procedure. Except where specified that testing after an approved cleansing or wetting procedure is unnecessary, all fabrics shall be tested after being subjected to the appropriate procedure specified in Clause 5.

NOTE For testing after cleansing it is permissible to prepare the individual test specimens from a larger sample which has been cleansed.

In all cases, only the face of the fabric shall be tested, if this is apparent. Alternatively only that face which is shown by pre-testing to spread flame or spread flame faster shall be tested.

For combinations of curtains and linings, the face of both fabrics shall be tested, i.e. the front and back of the combination.

6.2.2 The test methods as described in BS EN ISO 6941:2003, Procedure “A” (surface ignition) shall be used. Three specimens shall be tested in the machine direction and three in the cross direction in accordance with BS EN ISO 6941 using a 10 s flame application time.

BS EN ISO 6941 (surface ignition) specimen holder 560 mm × 150 mm and specimen size 560 mm × 170 mm shall be used.

In each of at least four specimens, no part of any hole nor any part of the lowest boundary of any flame shall reach either vertical edge of the sample, nor shall the first marker thread be severed.

NOTE In either of the two remaining specimens not more than the first marker thread or burning or hole formation to any one vertical edge is permitted.

If the first marker thread is severed and burning or hole formation to both vertical edges of the sample occurs, the fabric shall be deemed not to comply with the requirements for type “A” of this British Standard.

6.3 Type “B” performance requirements

6.3.1 All fabrics shall be tested prior to any cleansing procedure. Except where specified that testing after an approved cleansing or wetting procedure is unnecessary, all fabrics shall be tested after being subjected to the appropriate procedure specified in Clause 5.

NOTE For testing after cleansing it is permissible to prepare the individual test specimens from a larger sample which has been cleansed.

In all cases, only the face of the fabric shall be tested, if this is apparent. Alternatively only that face which is shown by pre-testing to spread flame or spread flame faster shall be tested.

For combinations of curtains and linings, the face of both fabrics shall be tested, i.e. the front and back of the combination.

6.3.2 The test methods as described in BS EN ISO 15025:2002, Procedure “A” (surface ignition) shall be used. Three specimens shall be tested in the machine direction and three in the cross direction in accordance with BS EN ISO 15025:2002 using a 15 s flame application time.

No part of any hole nor any part of the lowest boundary of any flame shall reach the top edge or either vertical edge of the sample. If any part of any hole or any part of the lowest boundary of any flame, reaches the top edge or either vertical edge, or if there is any separation of any flaming debris droplets in the testing of one specimen, a further six specimens shall be tested. If all six new specimens comply with the above requirements, the fabric shall be deemed to conform to the requirements for type “B” of this British Standard.

6.4 Type “C” performance requirements

6.4.1 All fabrics shall be tested both before and after the cleansing procedure of 50 cycles of standard wash in accordance with BS EN ISO 10528.

6.4.2 The test methods as described in BS EN ISO 15025:2002, Procedure “A” (surface ignition) shall be used.

For combinations of curtains and linings, the face of both fabrics shall be tested, i.e. the front and back of the combination.

Eight sets of specimens shall be prepared, each set consisting of two specimens with their longer edges in the machine direction and two specimens with their longer edges in the cross direction. Four sets of specimens shall be subjected to the cleansing procedure specified in **6.4.1**.

NOTE For testing after cleansing it is permissible to prepare the individual test specimens from a larger sample which has been cleansed.

One set of specimens that has not been subjected to the cleansing procedure shall be tested using a 5 s flame application time. The flame shall be applied to the face of one specimen with its longer edges in the machine direction; to the face of one specimen with its longer edges in the cross direction; to the back of one specimen with its longer edges in the machine direction; and to the back of one specimen with its longer edges in the cross direction.

The sequence shall be repeated on the remaining sets of specimens that have not been subjected to the cleansing procedure, using flame application times of 15 s, 20 s, and 30 s.

Similarly, the four sets of specimens that have been subjected to the cleansing procedures shall be tested, using flame application times of 5 s, 15 s, 20 s, and 30 s.

No part of any hole nor any part of the lowest boundary of any flame shall reach the top edge or either vertical edge of the sample specimen and there shall be no separation of any flaming debris from any specimen, or if the mean afterflame or afterglow times exceed 2.5 s, the fabric shall be deemed not to comply with the requirements for type “C” of this British Standard.

7 Marking

Except for fabrics used by the Department of Health, for which particular marking requirements are given in the purchase contract, a fabric for which conformity to the requirements of this British Standard is claimed shall be supplied with the following information:

- 1) Manufacturer’s name, trademark or other identifying mark.
- 2) The statement ‘Flammability complies with the requirements of BS 5867-2:2008, adding type “A”, type “B” or type “C” as appropriate.¹⁾
- 3) A statement as to the durability of the fire resistance of the fabric.
- 4) Instructions on any special precautions to be taken concerning care (including cleansing) of the curtain, drape or window blind to be manufactured from the fabric, preferably using an appropriate care labelling symbol in accordance with BS EN ISO 3758 and taking account of the durability procedure specified in Clause 5. If the fabric is unsuitable for cleansing this shall be stated.
- 5) If the fabric has a non-durable finish, it shall be labelled as specified in Clause 5. Any finished assembly of fabric having a non-durable finish shall be permanently labelled in the same way.

¹⁾ Marking BS 5867-2:2008 on or in relation to a product represents a manufacturer’s declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is solely the claimant’s responsibility. Such a declaration is not to be confused with third-party certification of conformity.

Bibliography

For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Other references

GREAT BRITAIN. Regulatory Reform (Fire Safety) Order 2005.
London: The Stationery Office. ISBN 9780 1107 2945 9.

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