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# Sheets, sheeting, pillowslips, towels, napkins, counterpanes and continental quilt secondary covers suitable for use in the public sector

## Part 3. Specification for counterpanes and continental quilt secondary covers including flammability performance

Articles de literie (draps, taies d'oreillers,  
dessus-de-lit et housses de couettes) et articles  
de lingerie (torchons, serviettes de table,  
serviettes de bain) pour usage dans les  
collectivités publiques  
Partie 3. Dessus-de-lit et housses de couettes  
ignifuges — Spécifications

Laken, Kopfkissenbezüge, Handtücher,  
Servietten, Tagesdecken und Bettbezüge für  
die Verwendung im öffentlichen Bereich  
Teil 3. Schwerentflammare Tagesdecken und  
Bettbezüge

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## Committees responsible for this British Standard

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The preparation of this British Standard was entrusted by the Textiles and Clothing Standards Policy Committee (TCM/-) to Technical Committee TCM/2, upon which the following bodies were represented:

- British Clothing Industry Association
- British Railways Board
- British Textile Employers' Association
- British Textile Technology Group
- Consumer Policy Committee of BSI
- Department of Health
- Flax and Linen Association (GB)
- Home and Contract Furnishing Textiles Association
- Man-made Fibres Producers' Committee
- Ministry of Defence
- Textile Research Council
- Textile Services Association Ltd.

This British Standard, having been prepared under the direction of the Textiles and Clothing Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 28 February 1991

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## Foreword

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This Part of BS 5815 has been prepared under the direction of the Textiles and Clothing Standards Policy Committee and forms a Part revision of BS 5815 : 1979 which is withdrawn.

This revision of BS 5815 includes additional products and is being published in three Parts as follows:

Part 1 Specification for sheeting, sheets and pillowslips

Part 2 Specification for towels and napkins

Part 3 Specification for counterpanes and continental quilt secondary covers including flammability performance

In this Part, requirements for counterpanes and continental quilt secondary covers, including flammability performance, are specified; these products were not included in BS 5815 : 1979.

The format used is that the standard first defines the fabrics and then the articles made from each fabric. For clarity and ease of communication each fabric and article has a reference comprising three letters, followed, where appropriate, by a number to indicate the width option.

BS 5815 covers only the basic description of the products and their construction and performance requirements. Purchasing authorities therefore may need to include additional information.

This Part of BS 5815 covers the end products quoted but can also be used to specify the fabrics from which they are manufactured.

Many properties can not be specified objectively and can not therefore be included in this standard. Examples of such properties include colour, handle, appearance and details of additional design features. Public sector purchasing authorities may be able to supply standard patterns which cover these properties and serve to resolve any ambiguities of description.

This Part of BS 5815 includes flammability requirements which refer to accepted test methods. These requirements are to some extent arbitrary but represent the minimum levels that major public sector users require.

When assessing resistance to ignition it can be misleading to assume that an individual item, tested in isolation and found to be satisfactory, will provide the same degree of protection when used in a composite form. The only way to assess the performance rating of the composite item is to test the total composite, e.g. continental quilt complete with secondary continental quilt cover.

This Part of BS 5815 does not include a requirement for electrostatic properties. Some of the articles may, on this account, not be suitable for use in some locations in health care premises. Attention is drawn to DHSS requirements precluding the use of static-prone textiles in operating theatres. Equally, the standard does not cover requirements for physiological comfort and again there may be some medical situations where not all of the products are equally suitable.

**Compliance with a British Standard does not of itself confer immunity from legal obligations. In particular, attention is drawn to Statutory Instrument 1986 No. 26, the Textile Products (Indications of Fibre Content) Regulations 1986.**

# Specification

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## 1 Scope

This Part of BS 5815 specifies requirements, including flammability performance, for the materials, manufacture, make-up and testing of counterpanes and continental quilt secondary covers intended for the public sector.

The dimensions of these articles are also specified.

Information to be supplied by the purchaser is given in appendix A.

NOTE. The titles of the publications referred to in this standard are listed on the inside back cover.

## 2 Definitions

For the purposes of this Part of BS 5815 the definitions given in BS 1903, BS 5438, BS 5523, BS 6189 and BS 7175 apply.

## 3 Designation

### 3.1 Fabrics

Fabrics shall be designated by a condensed technical description containing the following:

- (a) a first letter to indicate whether the fabric is for counterpanes (C) or for continental quilt covers (Q);
- (b) a second letter (F) to indicate a fabric;
- (c) an oblique stroke;
- (d) a letter to indicate the fibre, i.e. cotton (C), modacrylic (M) or polyester (P);
- (e) a space;
- (f) a letter to indicate the fabric grade (G or H).

### 3.2 Counterpanes and continental quilt covers

#### 3.2.1 General

Counterpanes and continental quilt covers shall be designated by a condensed technical description containing the following:

- (a) a first letter to indicate the item, i.e. counterpane (C) or continental quilt cover (Q);
- (b) an oblique stroke;
- (c) a letter to indicate the fibre, i.e. cotton (C), modacrylic (M) or polyester (P);
- (d) a space;
- (e) a letter to indicate the fabric grade (G or H).

NOTE. Fabrics grade G are intended to be suitable for general public sector use. Fabrics grade H are intended to be suitable for NHS contracts.

#### 3.2.2 Continental quilt covers

To the designation specified in 3.2.1 shall be added the following:

- (a) a space;
- (b) a letter to indicate the relevant bed size, i.e. single bed (S) or 'Kings fund' bed (K).

## 4 Fabric

### 4.1 Fabric construction

Fabric shall comply with the relevant requirements given in table 1.

NOTE 1. Yarns should be evenly spun and fabrics uniformly woven or knitted. In the case of woven fabrics, selvages should be firm and straight.

Table 1. Constructional requirements for fabrics

Reference	Description	Fibre content	Width min.	Mass/unit area min.	Filling max.
		%	mm	g/m <sup>2</sup>	%
CF/C	Counterpane fabric, flame-retardant, cotton	100 cotton	180	270	2
CF/M	Counterpane fabric, flame-retardant, modacrylic	100 modacrylic	180	270	0
CF/P	Counterpane fabric, flame-retardant, polyester	100 polyester	180	270	0
QF/C	Continental quilt cover fabric, flame-retardant, cotton	100 cotton	139	145	2
QF/P	Continental quilt cover fabric, flame-retardant, polyester	100 polyester	139	145	0
Method of test		BS 4407	BS 1930	BS 2471	BS 4032

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In the case of woven fabrics, skew shall not exceed 3 % when determined in accordance with BS 2819.

Design repeats shall not vary in linear dimensions by more than 2 % of the repeat size.

Cotton fabrics shall be washed after flame-retardant treatment.

NOTE 2. Washing is intended to remove odour due to processing residues on the finished fabric.

NOTE 3. The finished fabric should be free from contaminants and textile auxiliaries used in yarn or fabric manufacture.

Particular care should be taken to remove contaminants on the fabric due to transfer printing.

Cotton fabrics shall be preshrunk to comply with the requirements for the dimensional change on washing given in table 2.

#### 4.2 Fabric performance

The fabric shall comply with the relevant requirements given in tables 2 and 3.

## 5 Counterpanes

### 5.1 Fabric

Counterpanes shall be made from fabric complying with clause 4.

### 5.2 Sewing thread

The sewing thread shall be either 100 % staple fibre polyester, ticket no. 120, or 100 % core spun polyester/polyester, contractor's metric ticket no. 180, as specified in BS 6157.

### 5.3 End hems

Counterpanes shall have  $2.5 \pm 1$  cm wide end hems of hem type 6.03.01 as described in BS 3870 : Part 2. A minimum of 0.5 cm of the raw edge shall be turned in.

### 5.4 Side edges

Side edges shall be either selvages or hems. Hems shall be type 6.03.01 as described in BS 3870 : Part 2 and of width  $2.0 \pm 1$  cm. A minimum of 0.5 cm of the raw edge shall be turned in.

### 5.5 Sewing

Hems shall be sewn using stitch type 301 as described in BS 3870 : Part 1 and there shall be not less than 3 stitches per centimetre.

NOTE. The sewing should be of even tension throughout and the ends should be finished securely and neatly.

### 5.6 Dimensions

Counterpanes shall be made up without joinings to the finished dimensions specified in table 4.

## 6 Continental quilt covers

### 6.1 Fabric

Continental quilt covers shall be made from fabric complying with clause 4.

### 6.2 Sewing thread

The sewing thread shall be either 100 % staple fibre polyester, contractor's metric ticket no. 120 or 100 % core spun polyester/polyester, contractor's metric ticket no. 180, as specified in BS 6157.

### 6.3 Hems and seams

Hems at opening shall be  $2.5 \pm 1$  cm deep of type 6.03.01 as described in BS 3870 : Part 2. A minimum of 1.3 cm of raw edge shall be turned in.

Seams shall be either type 1.21.01 or type 1.01.03, as described in BS 3870 : Part 2 and with a minimum bight of 0.7 cm.

### 6.4 Sewing

Stitches shall be as described in BS 3870 : Part 1. There shall be not less than 3 stitches per centimetre. Hems at openings shall be sewn using stitch type 301. Seam type 1.21.01 shall be sewn using stitch type 301. Seam type 1.01.03 shall be sewn using one of the following stitch types:

- (a) (401.503);
- (b) (401.504);
- (c) (301.504);
- (d) (301.503).

### 6.5 Closures

#### 6.5.1 General

Closure shall be effected by means of pocketing, press studs or tape.

#### 6.5.2 Pocketing

Where pocketing is used as a method of closure, the pocket shall have a minimum depth of 20 cm and be finished with a hem complying with 6.3.

#### 6.5.3 Press studs

Press studs shall be manufactured from one of the following materials:

- (a) stainless steel;
- (b) nickel plated brass;
- (c) plastics.

NOTE. See appendix B for closures for continental quilts intended for NHS contracts.

The press studs shall be inserted at a maximum separation of 15 cm between centres and shall be attached to a minimum of two layers of fabric, one layer of which may be tape or other reinforcement.

Table 2. Performance requirements for fabrics

Fabric reference	Fabric grade	Breaking strength min. <sup>1)</sup>		Bursting strength min. <sup>2)</sup>	Tear strength min. <sup>1)</sup>		Drape max. <sup>3)</sup>	Abrasion resistance (minimum cycles to breakdown)	Dimensional change on washing <sup>4)</sup> max.	Dimensional change on dry cleaning <sup>4)</sup> max.	Dimensional change on heating <sup>4)</sup> max.	Tendency to snag (minimum rating)	Resistance to pilling (minimum rating)
		Warp	Weft		Warp	Weft							
CF/C	G	N 535	N 535	N 600	N 15	N 15	% 85	rubs 9 000	% -5	% -3	% -	-	-
	II	535	535	-	15	15	85	9 000	±5	-	±2.5	Mean 3-4 with no individual specimens less than 3	-
CF/M		535	535	600	15	15	85	9 000	-3	-3	-	-	-
CF/P	G	535	535	600	15	15	85	9 000	-3	-3	± 2.5	-	-
	II	1500	1000	-	65	40	85	20 000	±3	-	±2.5	Mean 3-4 with no individual specimens less than 3	4
QF/C	G	360	360	600	12.5	12.5	85	9 000	-5	-3	-	-	-
	II	270	270	-	12.5	12.5	85	9 000	±5	-	±2.5	-	-
QF/P	G	360	360	600	12.5	12.5	85	9 000	-3	-3	-2.5	-	-
	II	800	600	-	20	15	85	20 000	±3	-	±2.5	Mean 3-4 with no individual specimens less than 3	4
Method of test	BS 2576		BS 4768 30 mm diameter aperture	BS 4303		BS 5058 30 cm template	BS 5690 end point method at 12 ± 3 kPa pressure	BS 5807 <sup>5)</sup>	BS 4961 : Part 1	Appendix B of BS 4560 : 1990 <sup>6)</sup>	Appendix A of BS 3838 : 1980	BS 5811 <sup>5)</sup>	

<sup>1)</sup> Woven fabrics only.

<sup>2)</sup> Knitted fabrics only.

<sup>3)</sup> Tested on fabric in 'as received' state (i.e. not washed).

<sup>4)</sup> For both machine and cross fabric directions.

<sup>5)</sup> For grade G fabrics, after laundering in accordance with 6.5.3 of BS 5651 : 1990 except that a single cycle only is given. For grade II fabrics, after washing in accordance with procedure 1A of BS 4923, except at a temperature of 71 °C, and drying in accordance with procedure D.

<sup>6)</sup> Except that for grade II fabrics, a test temperature of 185 ± 4 °C is required.

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Table 3. Colour fastness requirements for fabrics

Agency	Minimum rating		Method of test
	Colour change	Staining	
Light	6	—	BS 1006, section B02
Photochromism	P6(P3-4)	—	BS 1006, section B05
Rubbing: dry wet	— —	4 4	BS 1006, section X12
Bleaching: peroxide	4	—	BS 1006, section N02
Dry cleaning Discolouration of solvent	4 —	— 4	Bs 1006, section D01
Washing	4-5	4-5	BS 1006, section C04 <sup>1)</sup>
Perspiration, acid and alkaline: colour change staining cotton staining polyester	4 — —	— 4 4	BS 1006, section E04

<sup>1)</sup> Except that the temperature is reduced to  $74 \pm 3$  °C.

Table 4. Dimensions of counterpanes and continental quilt covers

Reference	Description	Size description	Width min.	Length min.
			cm	cm
C/C	Flame-retardant counterpane, cotton	—	180	250
C/M	Flame-retardant counterpane, modacrylic	—	180	250
C/P	Flame-retardant counterpane, polyester	—	180	250
Q C S	Flame-retardant continental quilt cover, cotton	Single bed	137	200
Q C K		King's fund bed	137	180
Q P S	Flame-retardant continental quilt cover, polyester	Single bed	137	200
Q P K		King's fund bed	137	180
Test method			BS 1930	BS 1931



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#### 6.5.4 Tape

When tape is used as a method of closure, it shall be in polyester fibre and shall be approximately 18 cm long by 15 mm wide, turned over with the hem and sewn through the hem at all edges and diagonally, to form a box approximately 2.5 cm × 10 cm. The free end of the tape shall be heat-sealed.

#### 6.6 Dimensions

The finished dimensions shall be as specified in table 4.

### 7 Flammability

#### 7.1 Durability of flame-retardant treatment

Fabrics and made-up articles shall be tested in their original state and after laundering in accordance with table 5.

Table 5. Durability of flame-retardant treatment: number of washing, rinsing and centrifuging cycles	
Reference	Number of washing, rinsing and centrifuging cycles
CF/C, QF/C	200
CF/M	1
CF/P, QF/P	1
Test method	6.5.3 of BS 5651 : 1990 except that the number of cycles given in this table are completed

#### 7.2 Flammability of fabrics

The fabric shall comply with the following requirements when tested in accordance with clause 10 of BS 5438 : 1989:

- (a) for each test specimen, no part of the lowest boundary of any flame shall reach the upper edge or either of the vertical edges of the test specimen;
- (b) no hole shall extend to the upper edge or to either of the vertical edges of the test specimen;
- (c) the mean of the combined afterflame/afterglow time for the set of six specimens shall be not greater than 4 s.

If one specimen fails, one additional set of six specimens shall be tested. All six specimens in the additional set shall comply with (a) to (c) above.

#### 7.3 Flammability of made-up articles

The made-up article shall not ignite when tested in accordance with section three of BS 7175 : 1989 using ignition sources 0 and 5.

### 8 Marking, labelling and packaging

#### 8.1 Marking and labelling

Two labels shall be attached and positioned as follows:

- (a) on counterpanes, on the back, one label on each of two diagonally opposed corners;
- (b) on quilt covers, on the outer face of the underside, one label on each of the corners of the opening end.

The labels shall be attached by sewing along each of their four sides and shall bear the following details:

- (1) the name, trademark or other means of identification of the manufacturer;
- (2) the number and date of this British Standard, i.e. BS 5815 : Part 3 : 1991<sup>1)</sup>;
- (3) the product designation in accordance with clause 3;
- (4) the contract number;
- (5) the customer's name;
- (6) the fibre type;
- (7) information on care labelling in accordance with BS 2747.

NOTE. See appendix B regarding labels for counterpanes and continental quilt covers intended for NHS contracts.

#### 8.2 Packaging

If plastic bags are used as a means of packaging, there shall be six holes 5 mm in diameter along the bottom of the bag 38 mm from the seam. The bags shall bear a warning notice stating 'Plastic bags can cause suffocation. Keep them away from babies and children'.

A printed label shall be stuck to the packaging and shall bear the following information:

- (a) product reference;
- (b) quantity;
- (c) contract number and/or order number;
- (d) contractor's name;
- (e) month and year of supply;
- (f) batch reference.

<sup>1)</sup> Marking BS 5815 : Part 3 : 1991 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 therefore solely the responsibility of the person making the claim. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.

# Appendices

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## Appendix A. Information to be supplied by the purchaser

The following information should be supplied by the purchaser:

- (a) article type, fibre content, dimensions and reference;
- (b) colour and any special finishing requirements;
- (c) details of any marking or design elements or closures;
- (d) packaging instructions;
- (e) instructions for sampling, testing and inspection;
- (f) details of any additional requirements.

NOT see foreword.

## Appendix B. Supplementary information for NHS contracts

### B.1 Press studs

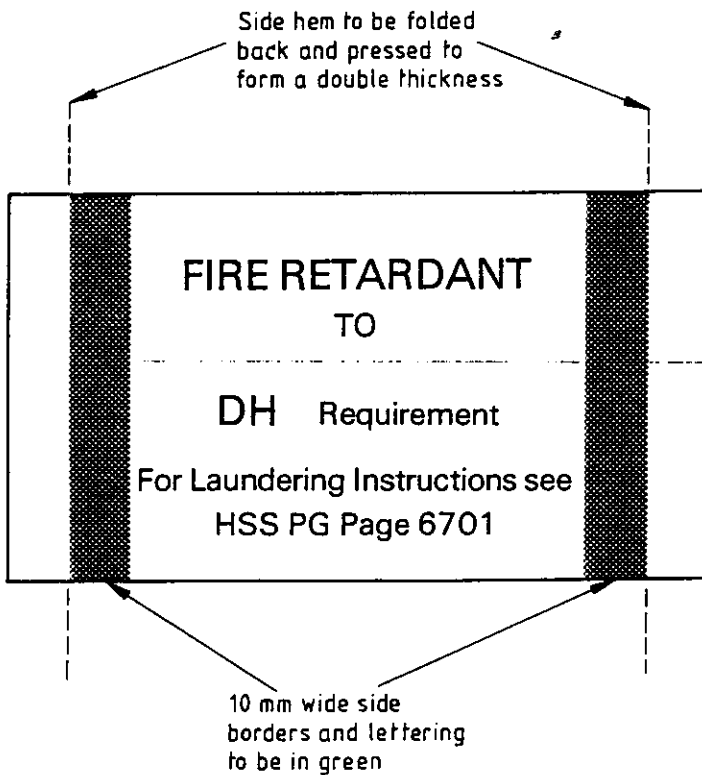
Where press studs are used for continental quilt covers intended for the NHS, they are to be manufactured from stainless steel only, in order to withstand hospital laundering.

### B.2 Marking and labelling

In place of the details specified in 8.1, the two labels are to bear the following information:

- (a) the contract number;
- (b) the contractor's name;
- (c) the fibre composition.

An additional label, conforming with figure 1, is to be sewn adjacent to each of the other two labels.



Label dimensions: 100 mm wide (excluding side hem) × 70 mm high.

Figure 1. Additional label for NHS contracts

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### Publication(s) referred to

- BS 1006 Methods of test for colour fastness of textiles and leather
- BS 1903 Glossary of terms used by the clothing industry
- BS 1930 Method for the determination of width of woven or knitted fabrics when relaxed at zero tension
- BS 1931 Method for the determination of length of woven or knitted fabrics when relaxed at zero tension
- BS 2471 Methods of test for textiles - woven fabrics - determination of mass per unit length and mass per unit area
- BS 2576 Method for determination of breaking strength and elongation (strip method) of woven fabrics
- BS 2747 Code of practice for textile care labelling
- BS 2819 Methods for determination of bow, skew and lengthway distortion in woven and knitted fabrics
- BS 3838 Specification for blazer fabrics
- BS 3870 Stitches and seams  
Part 1 Classification and terminology of stitch types  
Part 2 Classification and terminology of seam types
- BS 4032 Method of test for the determination of certain water- or alkali-soluble additives in cellulosic or synthetic fibres, yarns and fabrics or yarns and fabrics made from blends of such fibres
- BS 4303 Method for the determination of the resistance to tearing of woven fabrics by the wing-rip technique
- BS 4407 Methods for quantitative analysis of fibre mixtures
- BS 4560 Specification for fabrics for linings in uniform clothing
- BS 4768 Method for the determination of the bursting strength and bursting distension of fabrics
- BS 4923 Schedule of domestic and drying procedures for textile testing
- BS 4961 Methods for determination of dimensional stability of textiles to dry cleaning in tetrachloroethylene  
Part 1 Machine method
- BS 5058 Method for the assessment of drape of fabrics
- BS 5438 Methods of test for flammability of textile fabrics when subjected to a small igniting flame applied to the face or bottom edge of vertically oriented specimens
- BS 5523 Glossary of terms for textiles - weaves - definitions of general terms and basic weaves
- 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 5690 Method for determination of the abrasion resistance of fabrics
- BS 5807 Method for determination of dimensional change of textiles in domestic washing and drying
- BS 5811 Method for determination of the resistance to pilling and change of appearance of fabrics
- BS 6157 Specification for industrial sewing threads made wholly or partly from synthetic fibres
- BS 6189 Glossary of terms relating to fabrics and associated fibres, yarns and processes
- BS 7175 Methods of test for the ignitability of bedcovers and pillows by smouldering and flaming ignition sources