BRITISH STANDARD

BS 5335 :
Part 1 : 1991

Continental quilts

Part 1. Specification for quilts containing fillings other than feather and/or down

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Couettes
Partie 1. Couettes contenant un garnissage autre que plumes ou duvets — Spécifications

Bettdecken
Teil 1. Bettdecken ohne Daunen- oder Gänsefederfüllung

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Textiles and Clothing Standards Policy Committee (TCM/-) to Technical Committee TCM/12, upon which the following bodies were represented:

Association of Consulting Scientists
British Retailers Association
British Textile Confederation
Cooperative Union
Consumer Policy Committee of BSI
Department of Health
Home and Contract Furnishing Textiles Association
Institute of Trading Standards Administration
International Wool Secretariat
Mail Order Traders' Association
National Bed Federation Limited
National Fillings Trades Association
Natural Fillings Producers' Association

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Contents

Foreword

This Part of BS 5335 has been prepared under the direction of the Textiles and Clothing Standards Policy Committee and, together with Part 2, supersedes BS 5335 : 1984, which is withdrawn.

Since work is to be undertaken on European Standards for feather and down, it is anticipated that a European Standard for quilts filled with feather and/or down will eventually be published, which will necessitate withdrawal of any conflicting national standards. Hence, this revision comprises the following Parts.

Part 1. Specification for quilts containing fillings other than feather and/or down.

Part 2. Specification for quilts filled with feather and/or down.

In Part 1, the range of warmth categories has been extended, and several modifications have been made to the method for determination of thermal resistance. The requirement for thermal resistance is still applicable only to new quilts.

A qualitative requirement for resistance to percolation of the filling through the casing material is retained in this revision, although it is intended to publish a quantitative requirement, together with an associated method of test, as soon as a reproducible test becomes available.

General advice and information for manufacturers have been included in appendix F.

Assessed capability. Users of this British Standard are advised to consider the desirability of assessment and registration of a supplier's quality systems against the appropriate Part of BS 5750 by a third party certification body.

Compliance with a British Standard does not of itself confer immunity from legal obligations. In particular, attention is drawn to the Rag Flock and Other Filling Materials Regulations 1981 (SI 1981, No. 1218) and to the Textile Products (Indications of Fibre Content) Regulations 1986 (SI 1986, No. 26) and subsequent amendments.

Specification

1 Scope

This Part of BS 5335 specifies requirements for the construction, marking and performance of continental quilts containing fillings other than feather and/or down, supplied for domestic use.

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 standard, the definitions given in BS 1051 apply, together with the following.

2.1 continental quilt

An item of bedding, consisting of a filling material enclosed by a casing, that is sufficiently warm to be used without another form of top bedding other than an outer cover, and having a defined warmth-to-weight ratio and drape.

NOTE 1. For ease of reference, throughout the remainder of this standard, the term 'quilt' is used.

NOTE 2. A continental quilt is also known as a duvet.

2.2 filling

The insulating material contained within the casing.

2.3 casing

The textile fabric envelope containing the filling.

NOTE. A casing is also known as a primary cover.

2.4 outer cover

A textile fabric envelope easily removable for washing or dry-cleaning.

NOTE. An outer cover is also known as a secondary cover.

2.5 tog

A unit of thermal resistance, equal to one-tenth of a square metre kelvin per watt.

1 tog = 0.1 $m^2 \cdot K/W$.

2.6 thermal resistance of a quilt

Ten times the temperature difference between the two faces of a quilt (in K), when the heat flow rate across unit area is equal to 1 W/m^2.

NOTE. The thermal resistance of a quilt is also known as its tog value.

2.7 warmth-to-weight ratio

A measure of the efficiency of the quilt as a heat insulator relative to its mass. It is equal to the ratio of the thermal resistance of the quilt (in togs) to its mass per unit area (in g/cm^2).

2.8 drape

A measure of the ability of the quilt to lie in an appropriate manner over the user(s).

2.9 composite continental quilt

A quilt consisting of two or more separate parts, each with its own casing.

3 General

3.1 All types of quilt

The requirements shall apply to a quilt before cleansing, except where otherwise stated.

3.2 Composite quilts

Each part of a composite quilt and the composite formed from all the parts together shall comply with **3.1**.

4 Performance

4.1 Dimensions

The mean width and mean length shall not vary by more than +5, −0 % from the dimensions stated on the label, when measured in accordance with appendix B. Individual measurements of any dimension taken in accordance with appendix B shall not vary by more than +6, −2 % from the mean measurement of that dimension.

NOTE. Attention is drawn to the information given in F.1.

4.2 Drape

The mean lengthwise drape and mean widthwise drape shall not exceed 32 cm, when measured in accordance with appendix C.

4.3 Thermal resistance

4.3.1 The thermal resistance of a quilt shall be not less than the tog value stated on the label (see **8.1**(g)) and shall not exceed it by more than 3 togs, when determined in accordance with appendix D.

NOTE. Attention is drawn to the information given in F.2.

4.3.2 If the thermal resistance of a quilt can be varied, the quilt shall comply with **4.3.1** in each mode of use specified by the manufacturer (see **8.1** (g)).

4.4 Warmth-to-weight ratio

The warmth-to-weight ratio shall be not less than 100, when calculated in accordance with appendix E.

4.5 Washing and dry-cleaning

Any label used on the quilt shall comply with BS 5742. If a quilt is washable or dry-cleanable, there shall be no visible breakdown of seams after the cleansing instructions given on the quilt label (see **8.1** (d) and **8.1** (e)) have been followed.

NOTE. The general appearance of the quilt should not alter after cleansing, nor should there be any visible defects, e.g. tears, puckering or lumpiness.

4.6 Mass per unit area

When measured in accordance with appendix E, the mass per unit area shall be within ± 10 % of the nominal mass per unit area stated on the label (see **8.1** (h)).

5 Filling

All fillings shall be new and shall comply with the appropriate requirements of BS 1425 : Part 1.

6 Colour fastness and dimensional stability

6.1 General

If the quilt is washable or dry-cleanable, the requirements of **6.2** and **6.3** shall apply both before and after one cleansing (see **8.1** (d) and (e)).

NOTE 1. The casing should be such as to be capable of satisfactorily retaining the filling and allowing a sufficient level of moisture vapour transmission.

NOTE 2. See F.3 for recommendations concerning air permeability of casing fabrics.

6.2 Colour fastness

The colour fastness of the casing shall be as given in table 1.

6.3 Dimensional stability

6.3.1 If the quilt is washable, the mean dimensional change in width and length of the casing fabric shall not exceed 5 %, when tested in accordance with the procedure given in BS 5807, but using the washing and drying instructions given on the label.

6.3.2 If the quilt is dry-cleanable, the mean dimensional change in width and length of the casing fabric shall not exceed 5 %, when tested in accordance with BS 4961 : Part 1.

7 Construction

7.1 General

If the quilt is manufactured with channel walls, they shall extend continuously from one edge of the quilt to the opposite edge of the quilt.

7.2 Seams

All seams of the casing shall be sewn with not less than 40 stitches per 10 cm for quilts with natural fillings, and not less than 32 stitches per 10 cm for quilts filled with man-made fibres, unless one of the following occurs:

(a) the edges of the casing are bound, in which case they shall be sewn with not less than 20 stitches per 10 cm;

(b) the edges of the casing are overlocked, in which case they shall be sewn with not less than 50 stitches per 10 cm.

7.3 Sewing thread

The sewing thread used shall be not less than 350 dtex. If cotton, the average breaking strength shall be not less than 7.35 N, when tested in accordance with BS 1932 : Part 1.

8 Marking

8.1 The casing of each quilt shall be marked or labelled with the following.

(a) The number and year of this British Standard, i.e. BS 5335 : 1991[1)].

(b) The manufacturer's name, trademark or other means of identification.

(c) The description of the filling material.

(d) If the quilt is washable, appropriate washing and drying instructions.

NOTE. The user's attention should be drawn to the capacity of washing and drying machines required for laundering the quilt.

(e) If the quilt is dry-cleanable, the appropriate symbol from BS 2747 together with advice on professional cleaning and the necessity for adequate airing after dry-cleaning to avoid exposure to residual solvent.

(f) The length and width of the quilt in centimetres, which shall be described as approximate. If the quilt is given a description listed in table 2, the quilt shall be of the corresponding size given in table 2.

Table 1. Minimum colour fastness ratings

Method of test in accordance with BS 1006							
Water section E01		Rubbing section X12		Washing section C06. Test A2S		Dry cleaning section D01	
Colour change	Staining	Dry	Wet	Colour change	Staining	Colour change	Staining
4	4	4	3-4	3-4	3-4	4	4

[1)] Marking BS 5335 : 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.

(g) The claimed thermal resistance of the quilt, using one of the values given in the following list:

4.5 togs minimum;
6.0 togs minimum;
7.5 togs minimum;
9.0 togs minimum;
10.5 togs minimum;
12.0 togs minimum;
13.5 togs minimum;
15.0 togs minimum.

Where the thermal resistance of a quilt varies according to its mode of use (e.g. which surface is uppermost), the claimed thermal resistance shall be marked for each mode of use, together with the manufacturer's instructions as to the manner by which the variation is achieved.

(h) The nominal mass per unit area, in g/m^2, determined in accordance with appendix E, and stated to the nearest 25 g/m^2.

(i) The description of the fibre content of the casing materials.

8.2 The following information shall be stated on the packaging of a quilt, or in an explanatory leaflet enclosed within the packaging; a minimum character height of 2.5 mm (approximately 7 point) shall be used.

(a) The thermal resistance of the quilt as given in 8.1 (g) together with either:

(1) the statement 'British Standard warmth categories range from summer use to warm to extra warm in the following ratings 4.5, 6, 7.5, 9, 10.5, 12, 13.5, 15 togs minimum respectively'; or

(2) a reproduction of table 3.

(b) The mass per unit area of the quilt as given in 8.1 (h) together with the statement 'The mass per square metre of most continental quilts lies within the range 350 g to 1000 g.'

Table 2. Quilt description and size

Quilt description	Minimum quilt size
	cm
Single	135 × 200
Extra long single	135 × 220
Double	200 × 200
Extra long double	200 × 220
King size	225 × 220

Table 3. Warmth classification

Minimum Rating	4.5 togs	6.0 togs	7.5 togs	9.0 togs	10.5 togs	12.0 togs	13.5 togs	15.0 togs
Warmth Classification	← Summer Use ———			Warm ———		Extra Warm ——→		

Appendices

Appendix A. Conditioning

A.1 Lay the quilt flat, or suspend the quilt from one side, such that there is a minimum of 25 cm free air access to all surfaces of the quilt. If a channelled quilt is suspended for conditioning, the channels shall be horizontal.

A.2 Condition the quilt in an atmosphere maintained at a relative humidity of 65 ± 5 % r.h., measured to an accuracy of ± 2 % r.h., and a temperature of 20 ± 2 °C, for a minimum period of 24 h.

NOTE. The minimum period for conditioning differs for determination of thermal resistivity (see D.4.2(c)).

Appendix B. Measurement of dimensions

B.1 Test apparatus (see figure 1)

The test apparatus consists of a table top at least 2.5 m long and at least 0.75 m wide on which the tensioning apparatus is mounted centrally. The tensioning apparatus consists of a rigid rod, the same length as the table top, on which are mounted two freely-sliding clamps. One clamp is fixed in any position along the rod by means of a grub screw, the other is connected via two pulleys mounted on low friction bearings to a mass of 1 kg suspended over the end of the table top. Both clamps are fitted with jaws 8 cm wide. The rod is securely attached to the table top by a fixing post at each end.

B.2 Preparation and conditioning

Condition the quilt in accordance with appendix A.

B.3 Procedure

B.3.1 Lay the conditioned quilt on the table top and position it such that one edge is approximately 10 cm from fixing post A (see figure 1) with an adjacent edge parallel to the rod.

B.3.2 Move clamp X (see figure 1) so that it is adjacent to the other edge of the quilt and then firmly tighten the grub screw. Attach the quilt edge to clamp X, trapping as little fabric as possible.

B.3.3 Attach clamp Y (see figure 1) to the opposite edge, trapping as little fabric as possible.

B.3.4 Gently release the 1 kg mass and allow the quilt to become tensioned. If clamp Y is less than 1 cm from fixing post A after tensioning, position clamp X nearer to fixing post B.

B.4 Measurement of width

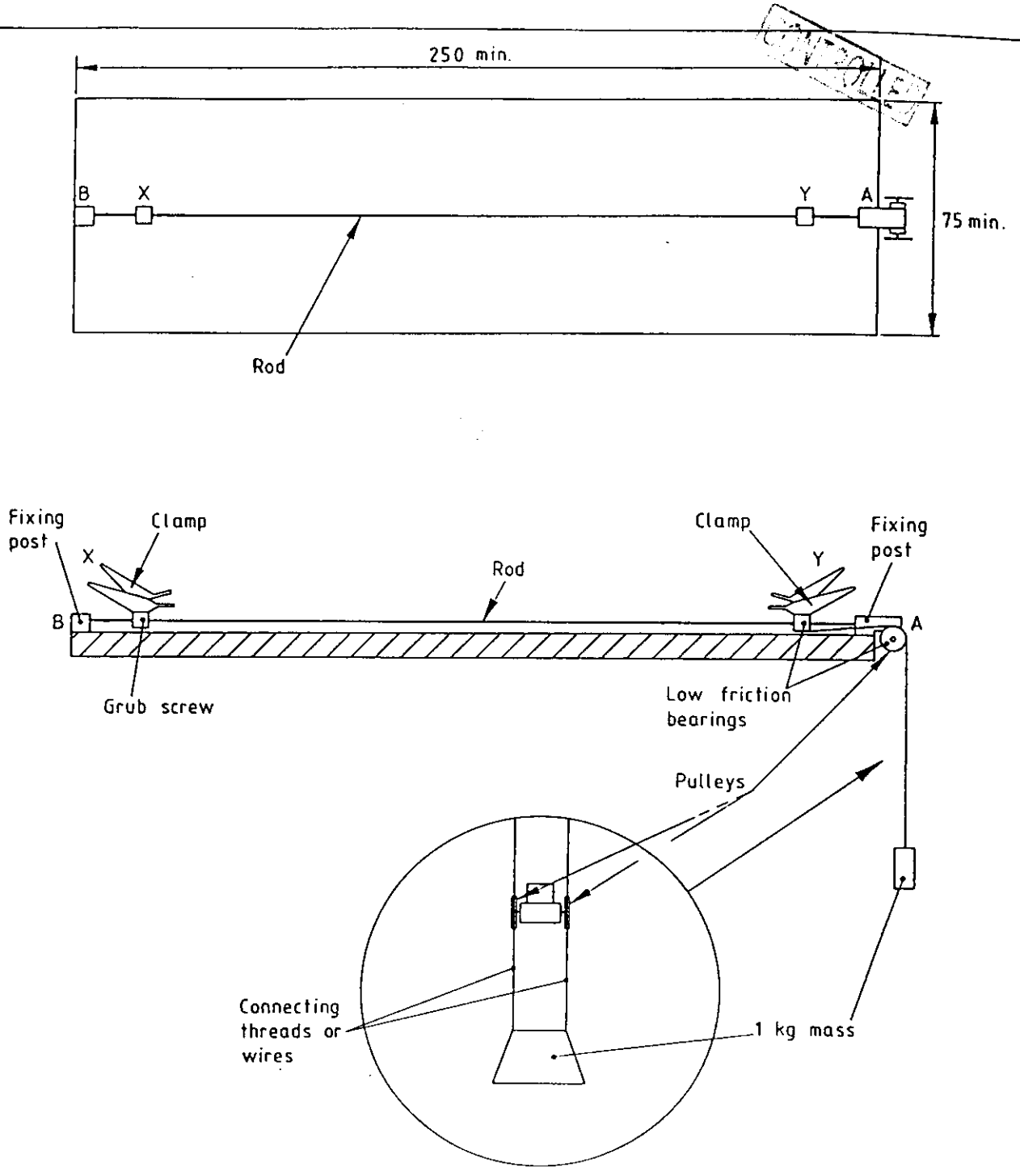
The width of the quilt is measured in three places, at approximately uniform spacings along the quilt, with no measurement within 15 cm of any corner. For each measurement, after tensioning the quilt by following the procedure described in B.3, measure the width of the quilt (in centimetres) with a metal tape along the rod, including the fabric trapped by the clamps.

B.5 Measurement of length

Take three measurements of the length of the quilt in the manner described in B.4.

B.6 Test report

Calculate the mean width and mean length and express each to the nearest centimetre. Report the mean width, mean length and each individual value.



All dimensions are in centimetres.

Figure 1. Apparatus for the measurement of dimensions of quilts

Appendix C. Measurement of drape

C.1 Apparatus

C.1.1 *Flat horizontal table*, of dimensions equal to or larger than the quilt to be examined.

C.1.2 *Cylinder*, 30 cm in diameter and 250 cm in length.

NOTE. A cylinder fabricated from sheet metal is conveniently light.

C.2 Procedure

C.2.1 Condition the quilt in accordance with appendix A.

C.2.2 Place the cylinder on the table parallel to and approximately 75 cm from one edge. Arrange the quilt on the table with the widthwise edges of the quilt parallel to the cylinder axis and with one end resting on the cylinder so that the edge of the quilt rests along the highest part of the cylinder. Stand facing the cylinder and place each hand on the quilt where it rests on the cylinder. Place the two hands so that the length of the edge of the quilt is divided approximately into thirds. Roll the cylinder forwards so that the quilt is dragged forwards and projects over the cylinder. Continue the movement until the edge of the quilt comes down and just touches the table.

Measure the distance between the line where the edge of the quilt touches the table and the line of contact of the cylinder with the table.

NOTE. A convenient method of determining this distance is to measure:

(a) the distance between the point of contact of the cylinder and the nearest parallel edge of the table, at each end of the cylinder; and

(b) the distance between the same edge of the table and the edge of the quilt, at five places.

The difference between the mean of the two measurements in (a) and the mean of the five measurements in (b) is the required distance.

C.2.3 Turn the quilt over so that the lower surface becomes uppermost and repeat C.2.2.

C.2.4 Repeat C.2.2 and C.2.3 for the opposite widthwise edge of the quilt, to make a first group of four measurements.

C.2.5 Make a further group of four measurements, using the procedure in C.2.2 to C.2.4, but with the lengthwise edges of the quilt parallel to the cylinder axis.

C.3 Test report

Report to the nearest centimetre, the mean of the first group of four measurements as 'lengthwise drape' and the mean of the second group of four measurements as 'widthwise drape'.

Appendix D. Determination of thermal resistance

D.1 Principle

The thermal resistance of quilts is determined using a specially designed single specimen apparatus permitting conductance/transmittance measurements to be carried out. The quilt to be measured is laid upon a horizontal surface maintained at skin temperature whilst the air layer above the quilt is maintained at a constant relative humidity and temperature. The thermal resistance of the quilt plus the thermal resistance of the air layer is calculated, and the thermal resistance of the air layer is subtracted from this to give the thermal resistance of the quilt itself. Figure 2 illustrates two types of apparatus.

NOTE. The measurement of the thermal transmission properties of insulating materials is not easy; it is not possible in this standard to give sufficient detail for the apparatus to be constructed and operated by personnel inexperienced in heat measurements. Apparatus should be built and operated in accordance with the principles of BS 874 : Part 1.

D.2 Apparatus

D.2.1 *General*

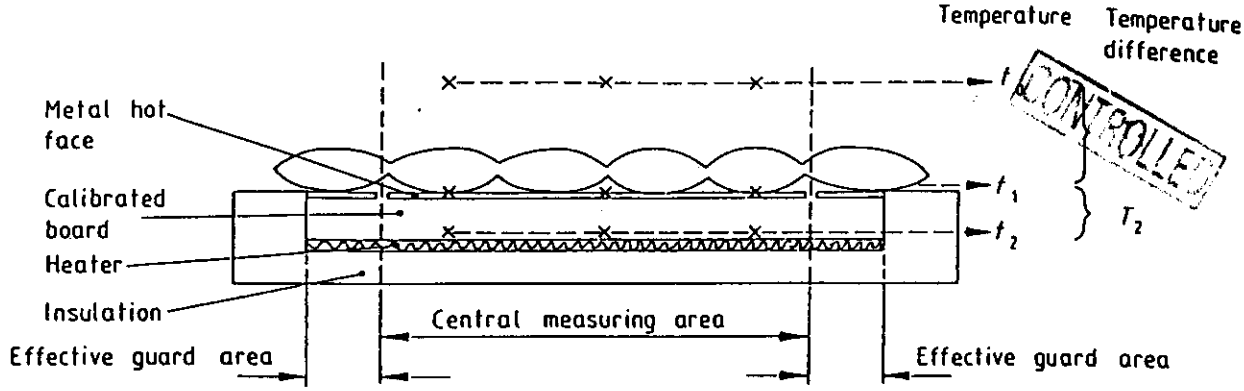
Test apparatus for the determination of thermal resistance of quilts shall be so designed that it complies with the following.

(a) The apparatus shall be horizontal, with the heat flow upwards, designed so that measurements are made between the upper hot face of the apparatus and the ambient air above the quilt.

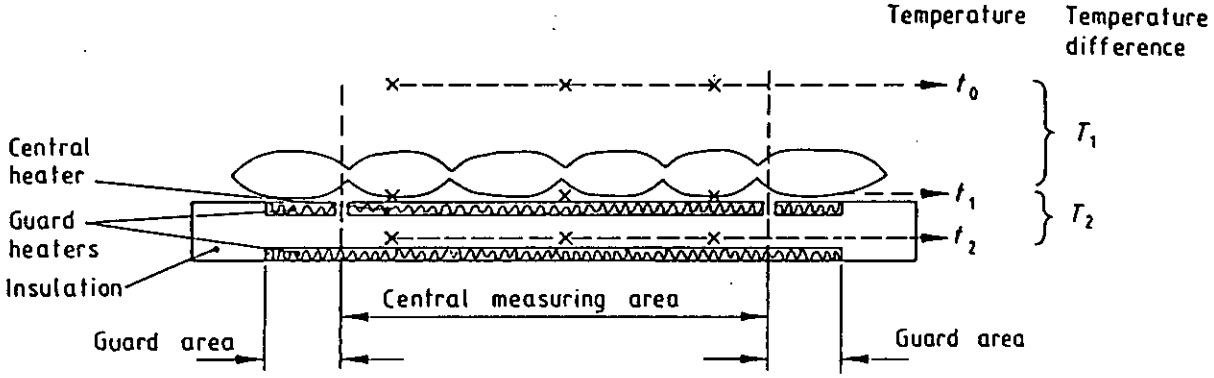
(b) The surface of the upper hot face of the apparatus shall be flat, isothermal, metal and shall have a matt black finish. The central measuring area shall be a rectangle of minimum size 1.0 m × 0.6 m. The guard area or effective guard area around the central measuring area shall be at least 0.15 m wide.

(c) Sets of at least five temperature sensors, each set uniformly distributed over the central measuring area, shall be used to measure the upper hot face and lower hot face temperatures.

(d) A set of at least five shielded temperature sensors, uniformly distributed over the central measuring area, shall be used to measure the temperature of the air layer above the quilt. The set shall be movable in a vertical direction so that it can be placed at a height of 75 mm to 100 mm vertically above the top surface of the quilt (see D.4.4).



(a) Comparator apparatus



(b) Guarded hot plate apparatus

Key
t_0 is the temperature of the air layer above the quilt;
t_1 is the upper hot face temperature;
t_2 is the lower hot face temperature;
T_1 is the difference between the upper hot face temperature and the temperature of the air layer above the quilt;
T_2 is the difference between the lower hot face temperature and the upper hot face temperature.
Thermal resistance is determined from 1 tog = 0.1 $m^2 \cdot K/W$.
X denotes temperature sensors.

Figure 2. Apparatus for the determination of thermal resistance of quilts

(e) Both the upper hot face temperature and the temperature of the air layer above the quilt shall be capable of being controlled to ± 0.1 °C.

NOTE. The high degree of control needed for the air temperature may be achieved by surrounding the upper part of the apparatus with a suitable temperature controlled hood giving sufficient air exchange with the room to ensure compliance with the humidity requirement above the quilt (see item (f)). Alternatively, computer controlled environments have been successfully employed.

(f) The apparatus shall be located in a room maintained at a relative humidity of 65 ± 5 % r.h. measured to an accuracy of ± 2 % r.h. and a temperature of 20 ± 2 °C. The apparatus shall be screened from any sources of heat external to the apparatus, such as radiators, lamps, solar radiation and personnel, and from draughts.

NOTE. Care should be taken with the positioning of any air-conditioning equipment.

(g) All surfaces visible to the upper surface of the quilt shall be of high thermal emittance.

NOTE. Most building materials and building finishes in current use have a high thermal emittance.

D.2.2 *Comparator apparatus*

If comparator apparatus is used, the thermal resistance of the quilt plus the air layer R_t is determined from the ratio of the temperature differences T_1 and T_2 and the thermal resistance of the calibrated board from the equation:

$R_t = (T_1/T_2) \times$ thermal resistance of the calibrated board

(See figure 2(a).)

D.2.3 *Guarded hot plate apparatus*

If guarded hot plate apparatus is used, the thermal resistance of the quilt plus the air layer R_t is determined from the energy dissipated in the central heater, the area of the central heater and the temperature difference T_1. The temperature difference T_2 is maintained at zero.

$$R_t = \frac{\text{central heater area} \times T_1}{\text{energy dissipated in central heater}}$$

(See figure 2(b).)

D.3 Verification of apparatus

D.3.1 *General*

The apparatus shall be verified at three points over the expected thermal resistance range (i.e. 5 togs to 15 togs) using reference materials as specified in D.3.2. The value of the thermal resistance of each reference material, when determined in accordance with D.3.3, shall be within 5 % of the corresponding stated value.

Verification shall be carried out, initially, on commissioning of the apparatus and thereafter at intervals not exceeding 12 months. Additionally, when repair, modification or maintenance of the equipment has taken place, which could affect the accuracy, or when there is reasonable cause to believe that the apparatus' results no longer accord (i.e. within 5 %) with the values of the reference materials, the apparatus shall be verified before it is further used.

D.3.2 *Reference materials*

To verify the apparatus, reference materials whose thermal resistances are accurately known shall be used. The three reference materials shall have thermal resistances of approximately 5 tog, 10 tog and 15 tog, and thicknesses of approximately 25 mm, 50 mm and 75 mm respectively.

NOTE. For details of the source of supply of reference materials, apply to Customer Information, BSI, Linford Wood, Milton Keynes MK14 6LE.

D.3.3 *Verification procedure*

Determine the thermal resistance of each reference material and of the air layer for each reference material.

Condition the reference material following the procedure given in appendix A.

Lay the reference material on the test apparatus, and place a temperature sensor in good contact with the upper surface of the reference material vertically below each of the air temperature sensors. Follow the procedure for the determination of thermal resistance given in D.4.4 to D.4.7, substituting the reference material for the quilt, but do not make any deduction for the thermal resistance of the air layer.

Calculate the thermal resistance of the reference material R_f (in togs) and the thermal resistance of the air layer R_a (in togs) from the equations:

$$R_a = R_t(t_3 - t_o)/(t_1 - t_o)$$

$$R_f = R_t - R_a$$

where

R_t is the total thermal resistance of the reference material and the air layer (in togs);

t_o is the temperature of the air layer above the reference material (in °C);

t_1 is the temperature of the reference material lower surface (in °C);

t_3 is the temperature of the reference material upper surface (in °C).

NOTE. The value of $(t_3 - t_o)$ is very small and extreme care is required in its measurement.

D.3.4 *Verification test report*

For each test of each reference material, report the difference between the mean determination of the thermal resistance and the stated thermal resistance of the reference material as a percentage of the stated value.

D.4 Test procedure

D.4.1 Prepare the quilt in the following manner.

(a) Remove the quilt from its packaging and shake vigorously from both sides and both ends.

(b) If a channelled quilt is loose filled, shake the quilt from each end until the filling occupies the middle of each channel.

(c) Lay the quilt, opened out, on a hard horizontal surface.

(d) Carefully spread the filling evenly throughout the quilt, checking its distribution by lightly running a hand over the casing.

D.4.2 Condition the quilt in the following manner.

(a) Take care not to disturb the uniformity of the distribution of the filling following the preparation procedure.

(b) Prepare the quilt as given in A.1.

(c) Condition the quilt in the atmosphere given in A.2 for a minimum period of 3 days if the quilt filling is 100 % man-made, otherwise for a minimum period of 5 days.

D.4.3 Transfer the quilt to the test apparatus without disturbing the filling. Place the quilt on the central measuring area. Fluff up each half of the quilt by lifting each side and gently shaking three times that half of the quilt, shaking across the channels if the quilt is channelled; this is to allow the filling to attain its maximum thickness without disturbing the uniformity of the distribution of the filling.

If necessary, re-position the quilt with gentle shakes so that all of the central measuring area is covered by the quilt and all points on the periphery of the central measuring area are not less than 30 cm from the nearest point on the edge of the quilt. If the quilt filling is man-made, release the tension in the quilt by lifting then releasing each corner in turn.

D.4.4 Adjust the apparatus so that the temperature sensors in the air layer above the quilt are placed at a height of 75 mm to 100 mm vertically above the top surface of the quilt, and the test conditions are:

(a) upper hot face temperature 33.0 ± 0.5 °C;

(b) temperature of air layer above the quilt 20.0 ± 0.5 °C;

(c) airspeed above the quilt not greater than 0.3 m/s.

D.4.5 Make determinations of the total thermal resistance of the quilt and air layer at equally spaced time intervals of not less than 60 min. The quilt and air layer shall be deemed to have reached equilibrium when the range between the lowest and the highest of the three most recent determinations of thermal resistance does not exceed 1 % of the mean of those three most recent determinations.

D.4.6 Control the temperatures of the upper hot face and of the air layer above the quilt to within ± 0.1 °C.

D.4.7 Make at least three more determinations of thermal resistance of the quilt and air layer at equally spaced time intervals of not less than 30 min. If the value of any of these three determinations differs by more than 1 % from the most recent mean calculated in accordance with D.4.5, then repeat D.4.5. The thermal resistance of the quilt is the mean of these three determinations less the thermal resistance of the air layer as determined in D.3.3.

D.5 Test report

Report, to the nearest one-tenth of a tog, the thermal resistance of the conditioned quilt.

Appendix E. Determination of mass per unit area and calculation of warmth-to-weight ratio

E.1 Determination of mass per unit area

Condition the quilt in accordance with appendix A.

Determine the mass of the conditioned quilt to the nearest gram.

Calculate the mass per square metre from:

$$\text{mass per square metre} = 10^4\, m/(b \times l)$$

where

m is the mass of the conditioned quilt (in g);

l is the length of the quilt (in cm), determined in accordance with appendix B;

b is the width of the quilt (in cm), determined in accordance with appendix B.

Express the result in g/m^2.

E.2 Calculation of warmth-to-weight ratio

Calculate the warmth-to-weight ratio from:

$$\text{warmth-to-weight ratio} = (R \times b \times l)/m$$

where

R is the thermal resistance of the quilt (in togs), determined in accordance with appendix D;

m, l and b are as defined in E.1.

Appendix F. Advice and information for manufacturers

F.1 Dimensions

The dimensions of quilts for standard bed sizes are given in table 4 for information.

Table 4. Dimensions of quilts for standard bed sizes

Quilt description	Minimum quilt size	Bed size
	cm	cm
Single	135 × 200	90 × 190
Extra long single	135 × 220	100 × 200
Double	200 × 200	135 × 190
Extra long double	200 × 220	135 × 190
King size	225 × 220	150 × 200

The dimensions of quilts for non-standard beds should be at least 35 cm wider than the bed for single beds, and 65 cm wider than the bed for double beds. The length of the quilt should not be less than the length of the bed.

F.2 Thermal resistance

The manufacturing specification for a quilt should include an allowance both for the experimental error resulting from the method of test for the determination of thermal resistance and for manufacturing tolerances. It should also be noted that, in some cases, packaging can reduce the tog value of a quilt and this should, therefore, be taken into account when claims for tog values are being made.

F.3 Air permeability parameters for casing fabrics

The recommendations put forward by particular fibre manufacturers should be followed. In the absence of such recommendations, the following guidelines are given.

Woven casing fabrics made from spun staple yarns should have a mean air permeability not exceeding 25 mL/(cm·s) with a maximum value of 30 mL/(cm·s), when tested in accordance with BS 5636. Any other woven casing fabric should have a mean air permeability not exceeding 15 mL/(cm·s) with a maximum value of [illegible] mL/(cm·s), when tested in accordance with BS 5636.