

Blankets suitable for use in the public sector —

Part 2: Specification for cotton leno cellular blankets

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1 Scope

This Part of BS 5866 specifies requirements for the materials, manufacture, make-up, dimensions, physical properties and colour fastness of cotton leno cellular blankets suitable for use in the public sector. Requirements for both adults' and children's blankets are specified.

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

2 Definitions

For the purposes of this Part of BS 5866, the definitions given in BS 6189 apply.

3 Materials

Cellular blankets shall be made wholly from cotton, with a staple length of not less than 2.5 cm.

4 Manufacture

4.1 Yarn

The same type of yarn shall be used for both warp and weft and shall be 2-fold, with singles and folding twist factors as stated in Table 1.

NOTE Yarns should be uniformly spun.

4.2 Weaves

The body part of the blanket shall be woven in a five and two leno weave. Along each side of the blanket there shall be a tucking strip, woven plain weave, of width shown in Table 1.

4.3 Number of threads per 10 cm

The number of threads per 10 cm shall be as specified in Table 1.

4.4 Selvedges

Selvedges shall be not less than 1 cm wide containing 12 ends of the yarn as used in the cloth with two ends weaving as one.

NOTE Selvedges should be firm and straight.

4.5 Finishing

The blankets shall be supplied either scoured only, or bleached, or dyed, or bleached and dyed.

Bleached, dyed and bleached and dyed blankets shall also comply with the appropriate requirements of clause 10.

NOTE The blankets should contain no size or filling.

5 Make-up

The ends of the blankets shall be finished with 2 cm hems in accordance with seam type 6.03.08, as classified in BS 3870-2. Hems shall be sewn using stitch type 301, as classified in BS 3870-1, with a stitch length not greater than 0.32 cm.

The sewing thread shall be polyester and cotton core spun, with polyester core and cotton sheath, of linear density 38 tex.

6 Dimensions

The dimensions of the cellular blankets shall be as given in Table 2 when determined as described in BS 5129.

NOTE BS 5129 gives a range of recommended dimensions for blankets not specifically intended for use in the public sector.

Table 1 — Physical properties

| Property | Adults' blankets | Children's blankets | Method of test |
|--------------------------------------|------------------|---------------------|----------------|
| Twist factor (max.) | | | |
| singles Z | 4 100 | 4 100 | A.1 |
| folding S | 3 200 | 3 200 | |
| Threads per 10 cm | | | |
| leno warp | 40 ± 4 | 40 ± 4 | A.2 |
| plain warp | 51 ± 4 | 51 ± 4 | |
| weft | 51 ± 4 | 51 ± 4 | |
| Mass (min.) | | | |
| scoured only blanket | 1.35 kg | 0.85 kg | A.4 |
| bleached and/or dyed blanket | 1.27 kg | 0.80 kg | |
| Breaking strength (min.) | | | |
| warp 20 threads | 350 N | 350 N | A.5 |
| weft 26 threads | 450 N | 450 N | |
| Dimensional change on washing (max.) | | | |
| warp | ± 4 % | ± 4 % | A.6 |
| weft | ± 4 % | ± 4 % | |

Table 2 — Dimensions (see A.3)

| Blanket category | Width (including tucking strip) | Length | Width of tucking strip (min.) |
|--------------------|---------------------------------|-----------|-------------------------------|
| | cm | cm | cm |
| Adults' blanket | 180 ± 3 % | 230 ± 3 % | 23 |
| Children's blanket | 145 ± 3 % | 185 ± 3 % | 3 |

Table 3 — Colour fastness of dyed blankets (minimum rating)

| Agency | Requirements | Method of test |
|-----------|-------------------------------|------------------|
| Light | 5 | BS 1006-B02:1990 |
| Washing | Change in colour 4 staining 4 | BS 1006-C04:1990 |
| Bleaching | Change in colour 4 | BS 1006-N01:1990 |

7 Physical properties

Mass, breaking strength and dimensional change on washing shall be as given in Table 1.

8 Flammability

Where flammability performance is specified, blankets shall comply with Part 4 of this British Standard.

9 Conditioning and testing atmosphere

Blankets shall be conditioned and tested in the standard temperate atmosphere for testing as defined in BS 1051, i.e. at a relative humidity of 65 ± 2 % and a temperature of 20 ± 2 °C.

10 Colour fastness and fluidity

For colour fastness, dyed blankets shall comply with Table 3. The cuprammonium fluidity of bleached only and bleached and dyed blankets shall be not more than 6 units as determined according to BS 2610.

11 Assessment of compliance

11.1 Selection of test samples

11.1.1 Inspection lot and test sample

A sampling scheme equivalent to at least one in every 3 000 blankets shall be used.

11.1.2 Test specimens

The test specimens shall be taken at points as widely dispersed as possible throughout the available test samples and no two specimens used for the determination of a particular property shall contain the same warp or weft threads.

11.2 Criteria of compliance

If any test sample complies with all the requirements of clauses 3 to 10, the inspection lot from which it was drawn shall be deemed to comply with the requirements of this Part of BS 5688. If one specimen in the test sample fails to comply with any of the requirements, further testing shall be carried out (see note).

NOTE Interested parties may agree on how the further testing is to be carried out, in the case of one specimen failing to comply with any of the requirements.

12 Marking

Blankets shall be supplied with the following information, e.g. on a label or swing ticket or on an accompanying invoice or other document:

- the manufacturer's name, trademark or other means of identification;
- the number and date of this British Standard, i.e. BS 5866-2:1991¹⁾;
- any other marking as the contract or order may direct.

Where flammability requirements are specified, blankets shall be marked with details in accordance with BS 5866-4.

¹⁾ Marking BS 5866-2:1991 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.

Appendix A Methods of test

A.1 Twist factor

Determine the linear density and twist as described in BS 2010 and BS 2085 respectively. For the purposes of this Part of BS 5688, calculate the twist factor as

$$\text{twist factor} = (\text{turns/metre})(\text{linear density})^{1/2}$$

A.2 Threads per 10 cm

Lay the blanket, or a full width portion not less than 1 m long, on a flat horizontal surface and place on it, at right angles to the threads to be counted, a steel rule graduated in millimetres. Measure the width of the strip to the nearest millimetre and count the number of threads. Calculate the number of threads per 10 cm. Take the mean of not less than three determinations, over different groups of threads, for each direction.

A.3 Dimensions of blanket

Spread the blanket out flat on a level surface. Use a steel rule graduated in millimetres for making the measurements. Measure both the length and width of the blanket in three places as follows:

- a) for measurement of length, one measurement in the centre of the blanket and the other two halfway between the centre and the inner edges of the tucking strips;
- b) for measurement of width, one measurement in the centre of the blanket and the other two halfway between the centre and the ends of the blanket.

No movement of the blanket should take place between the measurement of the length and the measurement of the width. Take the mean of the three measurements for length and width respectively.

A.4 Determination of mass of blanket

Condition the blanket by freely exposing it to the standard temperate atmosphere for testing as defined in BS 1051, i.e. at a relative humidity of $65 \pm 2\%$ and a temperature of $20 \pm 2^\circ\text{C}$, for at least 5 h. Determine the mass to within $\pm 0.5\%$.

A.5 Determination of breaking strength

Use the method described in BS 2576 but, owing to the nature of this particular fabric construction, fray down the specimen to 20 threads for tests in the warp direction and 26 threads for tests in the weft direction, regardless of the resultant specimen width.

A.6 Dimensional change on washing

Take from the leno portion a specimen in accordance with BS 4931 and overlock the edges to prevent fraying. Follow the procedure described in procedure 1A of BS 4923, except that the washing temperature shall be $71 \pm 3^\circ\text{C}$, then tumble dry using procedure E of BS 4923. Repeat this procedure twice. Determine the total dimensional change occurring as a result of the three cycles.