BRITISH STANDARD

BS 1425 :
Part 1 : 1991

Cleanliness of fillings and stuffings for bedding, upholstery and other domestic articles

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

Propreté des rembourrages et garnissages pour literie, meubles capitonnés et autres articles domestiques
Partie 1. Garnissages et rembourrages autres que plumes et duvets — Spécifications

Sauberkeit von Füll- und Polstermaterial für Bettzeug, Polsterwaren und andere Haushaltsartikel
Teil 1. Füll- und Polstermaterial außer Federn und Daunen

BSI STANDARDS

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/10, upon which the following bodies were represented:

Association of Public Analysts
British Textile Confederation
British Textile Technology Group
Consumer Policy Committee of BSI
Department of Trade and Industry (Laboratory of the Government Chemist)
Furniture Industry Research Association
Home and Contract Furnishing Textiles Association
Institute of Trading Standards Administration
National Fillings Trades Association
Natural Fillings Producers' Association

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

Department of Trade and Industry (Metrology and Standards Requirement Committee)
National Bed Federation Limited

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

First published, as BS 1425, January 1948
Second edition July 1951
Third edition May 1954
Fourth edition April 1960
Fifth edition, as BS 1425 : Part 1, June 1991

The following BSI references relate to the work on this standard:
Committee reference TCM/10
Draft for comment 86/41780 DC

ISBN 0 580 19637 2

Amendments issued since publication

Amd. No.	Date	
7788	29-6 93	D. Hicks.

Contents

Foreword

This Part of BS 1425 has been prepared under the direction of the Textiles and Clothing Standards Policy Committee and, with Part 2, forms a revision of BS 1425 : 1960, which will be withdrawn on a date to be announced. BS 1425 : 1960 is referred to in The Rag Flock and Other Filling Materials Regulations 1981 and will not be withdrawn until those Regulations are revised.

NOTE. Upon publication of this revision, BSI Sales Department will respond to purchase orders for BS 1425 by supplying copies of the 1991 edition. Copies of the 1960 edition may be obtained by quoting the number 'BS 1425/60'.

The other Part of BS 1425 is Part 2 'Specification for feather and/or down fillings and stuffings'.

Due to the increasing awareness of the risk of fire, the Furniture and Furnishing (Fire Safety) Regulations became law from 1 March 1989. These regulations require filling materials to be included in furniture and furnishings to comply with certain requirements for flame retardancy. However, the application of fire-retardant (FR) chemicals to those filling materials that are not naturally flame-retardant, may cause them to fail certain of the requirements in BS 1425 : 1960 and thus prevents monitoring of the cleanliness of FR treated materials. Therefore, a programme of work to establish a new testing regime was carried out jointly by the British Textile Technology Group and the Furniture Industry Research Association. In addition to facilitating differentiation between clean and 'dirty' FR treated filling materials, the opportunity has been taken to develop a more unified testing regime applicable to the wide range of materials used as fillings and stuffings.

The main consideration underlying this revision of this standard is that the standard should serve to establish whether fillings are hygienically clean and dust free. A microbiological cleanliness test has therefore been introduced. The remaining two test methods are for oil and dust measurement by determination of insoluble extract; these remain the same as in BS 1425 : 1960.

A significant part of the background to this approach, implicit in the 1960 edition and also implicit in this revision, is the onus placed on the manufacturer or producer of any filling material to satisfy himself that his production is run consistently in a manner which would enable any sample to comply with this standard. This may be achieved either by a high degree of confidence based on experience or by a reliable means of quality control (based, for example, on sampling of current production, rapid testing and recording of test results on these samples) to ensure that the production line consistently meets considerably stricter limits than those required by this standard. For that purpose, the basic problem of the manufacturer is to take samples from his current product and measure their properties at such intervals as will give adequate and timely warning of any failure to control production at the specified level of cleanliness. The frequency of sampling necessary for this will depend upon the uniformity of production (and for some fillings, of course, indirectly on the uniformity of the intake of raw materials). The method and frequency of sampling therefore cannot be specified in advance but should be determined by the manufacturer himself in the light of his own experience.

Although the basic definitions of the various types of filling materials used in BS 1425 : 1960 remain, the filling materials have been classified into three groups. These are used materials and materials of animal origin (**3.1**), new vegetable fibre fillings (**3.2**) and new synthetic filling materials (**3.3**). The processes of manufacture are no longer included.

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 No. 1218, to the Textile Products (Indications of Fibre Content) Regulations 1986 SI No. 26 and subsequent amendments.

Specification

1 Scope

This Part of BS 1425 specifies cleanliness requirements for fillings and stuffings other than feather and down used for bedding, upholstery and other domestic articles and describes methods of test.

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 1425, the following definitions apply.

2.1 gross sample

Of filling or stuffing material. One not less than 0.5 kg in mass, taken for the purposes of testing and/or inspection.

2.2 layered

Of filling or stuffing material. Having been processed to form a coherent layer of generally uniform thickness.

2.3 loose

Of filling or stuffing material. Not having been deliberately formed or constrained into a specific shape.

2.4 secondhand

Of filling or stuffing material. Having been previously used only as a filling or stuffing.

2.5 used

Of filling or stuffing material. Having been previously employed either as a filling or stuffing, or for any other purpose.

Additional definitions relating to this Part of BS 1425 are contained in BS 2005 : 1966.

3 Classification of fillings and stuffings

3.1 Used materials and materials of animal origin

This class comprises loose or layered filling and stuffing materials composed wholly or partly of used or secondhand materials, or loose or layered filling and stuffing materials composed wholly or partly of animal fibres, and includes the following.

(a) Rag flock, produced wholly or partly by tearing up spun, woven, knitted or felted materials, whether old or new, and irrespective of composition or types of fibre, or spun yarn, thread waste, card waste or other types of textile waste.

(b) Used or secondhand jute wadding, jute flock, cotton flock, cotton millpuffs, cotton felt, coloured cotton felt, or mixtures of cotton with man-made fibres.

(c) Wool fillings, new or used, curled woollen flock and filling materials containing wool.

(d) Used kapok, and mixtures of akund with kapok.

(e) New or used animal hair, curled or uncurled, and mixtures of animal hair with vegetable fibres.

(f) Used Algerian fibre, coir, sisal, hemp or other similar fibres.

(g) Used man-made fibres, including polyamide, polyester, chlorofibre, acrylic, viscose and cupro, acetate, polyethylene, polypropylene, alginate and vinylal.

(h) Rubberized animal fibre and/or hair, and rubberized animal fibre and/or hair/vegetable fibre mixtures.

(i) Bonded felts made from used materials.

(j) Used or secondhand cellular polymers, e.g. latex, polystyrene or polyurethane in any physical form.

(k) Mixtures of any of the materials referred to in items (a) to (j).

3.2 New vegetable fibre

This class comprises loose or layered filling and stuffing materials composed wholly of new vegetable fibre, or mixtures of new vegetable fibre and new man-made fibre, and includes the following.

(a) New jute wadding, jute flock, cotton flock, cotton millpuffs, cotton felt, coloured cotton felt, kapok, akund, coir, hemp, sisal or mixtures of these fibres.

(b) Rubberized vegetable fibre.

(c) Bonded felts made from new vegetable fibre.

(d) Mixtures of new vegetable fibre with new man-made fibre.

3.3 New synthetic materials

This class comprises filling and stuffing materials composed wholly of new synthetic fibres or polymers, and includes the following.

(a) New man-made fibres, including polyamide, polyester, chlorofibre, acrylic, viscose and cupro, acetate, polyethylene, polypropylene, alginate and vinylal.

(b) New cellular polymers, e.g latex, polystyrene or polyurethane in any physical form.

(c) Bonded felts made from new man-made fibre.

(d) Foam.

NOTE. The filling and stuffing materials listed in **3.1**, **3.2** and **3.3** are examples only; the lists are not exhaustive. If the composition of a material is unknown, or is in question, identification may be carried out using the methods described in 'Identification of Textile Materials'[1], 7th edition published by The Textile Institute.

[1] Available from The Textile Institute, 10 Blackfriars Street, Manchester M3 3DR.

4 Sampling

4.1 Gross sample

4.1.1 *General*

A gross sample of not less than 0.5 kg shall be taken. If the material is of such a nature that dust or short fibres become separated from the filling or stuffing material, a proportional amount by mass of such particles shall be included. The gross sample shall then be packed and sealed in a package, e.g. a sampling envelope, and protected from adverse conditions, e.g. rain, for transport to the laboratory where the tests are to be carried out.

NOTE 1. It is recommended that gloves are worn when taking gross samples of materials intended for bioburden testing.

NOTE 2. Gross samples of layered materials supplied in rolls should be taken in the form of strips cut across the full width of the roll together with any backing or inter-leaving material, which should remain with the filling material until it reaches the analyst.

NOTE 3. A gross sample may be taken from a bulk stock or consignment of filling material or finished articles or, if necessary, it may be taken from any one bag, bale or other package or finished article.

NOTE 4. If the sample has been taken from only one bag, bale or other package, out of a considerable number, this should be indicated.

4.1.2 *Sampling of loose material*

For loose material, each gross sample shall be collected by taking at random, from at least 20 places in the bulk, or in each bag, bale or other package selected for sampling, a number of separate fractions, each weighing approximately 30 g.

When duplicate or triplicate samples are required, several samples shall be drawn at the same time and in the same manner, by taking two or three fractions from the same place or from adjacent places, placing each of them in a separate sample bag, and repeating this process until the two or three gross samples are completed.

NOTE. When flocculent materials are being sampled, this is best achieved by taking one handful for each fraction and dividing it immediately and carefully between the two or three sample bags.

No other procedure, such as taking one large gross sample and then dividing it into two or three, shall be used.

4.1.3 *Sampling of layered material*

For layered material, each gross sample shall either be taken from a sufficient number of made-up pads or similar articles to make up the required sample mass, or shall be obtained by cutting strips, not less than 300 mm wide, across the full width of the roll of the material. Backing or inter-leaving material shall not be disturbed and shall accompany the sample.

When duplicate or triplicate samples are required, adjacent strips of material from a roll shall be used.

NOTE. Careful cutting of the strips into portions is recommended so that any variation due to layering can be reflected in each sample.

If duplicate or triplicate samples are obtained by cutting two or three adjacent strips across a roll, each strip shall be cut into twice as many pieces as the number of samples required, as shown in figure 1. The first gross sample shall comprise all the pieces numbered (1), the second sample shall comprise all the pieces numbered (2), etc.

4.2 Preparation of test specimens

Test specimens shall be taken from the gross sample in such a manner as to ensure that each test specimen is representative of the gross sample, as follows. Carefully open the parcel containing the sample and, after removing from layered materials any backing or inter-leaving material, arrange the whole of the sample on a sampling table. Divide the gross sample, whether it is loose or layered material, into 20 piles or heaps approximately equal in bulk.

Take small quantities of material from each of the 20 piles or heaps. In the case of any material from which short fibres or dust fall readily, include a proportional amount by mass of any short fibres and dust in each test specimen.

NOTE. It is recommended that gloves are worn when preparing specimens for bioburden tests. The sampling table should also be thoroughly cleaned before use, and after preparation of test specimens from each gross sample is completed.

5 Cleanliness

Filling and stuffing materials shall comply with the appropriate requirements given in table 1.

NOTE. Filling and stuffing materials should be free from vermin including the eggs, larvae and pupae of insects and parasites

6 Marking

Each bag, bale or other package of filling or stuffing material shall be provided with an attached label carrying at least the following information.

(a) The number and date of this British Standard, i.e. BS 1425 : Part 1 : 1991[1)].

NOTE 1. On any domestic article containing fillings or stuffings and offered for sale to the public bearing BS 1425 : Part 1 on the label, packaging or point of sale material, it should be clearly indicated that these claims for compliance refer to the filling/stuffing material only.

'(b) A description of the material including its classification in accordance with clause 3.'

After item (c), insert the following new item.

'(d) The date of manufacture of the material.

NOTE 2. In the case of used or secondhand materials this is the date of reprocessing them into materials as classified in 3.1.'

(c) The name, trade mark, or other means of identification of the supplier.

[1)] Marking BS 1425 : Part 1 : 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.

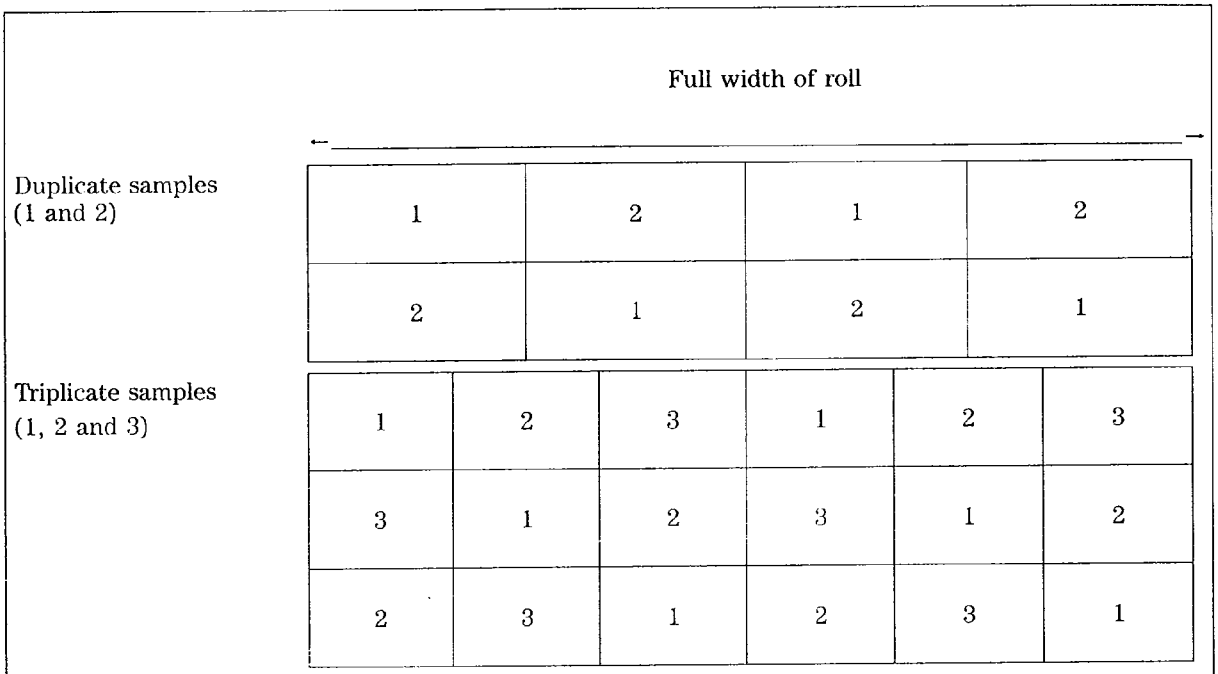

Figure 1. Pattern for duplicate or triplicate sampling of layered material

Table 1. Cleanliness

Material	Maximum bioburden (determined in accordance with appendix A)		Maximum insoluble extract (determined in accordance with appendix B)	Maximum oil[1] content (determined in accordance with appendix C)
	MacConkey agar	CLED[2] medium		
	cfu[3]	cfu	%	%
Used materials and materials of animal origin	5	10	2.8	—
New vegetable fibre	—	—	2.8	5.0
New synthetic materials	—	—	2.8	—

[1] For the purposes of this requirement, 'oil' is the material obtained by extraction with petroleum spirit.
[2] Cystine-Lactose-Electrolyte-Deficient.
[3] Colony forming units.

Appendices

Appendix A. Method for the determination of bioburden

A.1 Principle

A dip slide (a piece of flat rectangular plastic coated on both sides by agar and encased in a sterile cylindrical container) is submerged in a non-sterile solution and incubated at 37 °C overnight. The degree of microbial growth which occurs on the agar is indicative of the degree of contamination of the solution.

The dip slides are coated with two different types of agar, Cystine-Lactose-Electrolyte-Deficient (CLED) and MacConkey. CLED medium is a selective medium for the cultivation of urinary pathogens. MacConkey agar preferentially supports the growth of coliforms. These media, therefore, whilst still supporting the growth of other bacteria, exert selective pressure towards the growth of commensal and coliform bacteria.

A.2 Apparatus

A.2.1 *Wide mouth glass jars, of capacity 120 mL.*

A.2.2 *MacConkey agar and CLED medium dip slides*, 19 mm × 50 mm[1].

A.2.3 *Incubator*, capable of maintaining a temperature of 37 ± 1 °C.

A.3 Reagents

A.3.1 *Sterile saline solution*, containing 8.5 ± 0.2 g sodium chloride per litre.

A.4 Procedure

From the gross sample, take five test specimens in accordance with 4.2, of approximately 1.0 g, weighed to an accuracy of ± 0.05 g.

Place a test specimen in a sterile, 120 mL, wide mouth glass jar containing 100 mL of sterile saline solution. Close the jar and shake vigorously by hand for 60 ± 2 s. Remove the dip slide from its sterile container and momentarily submerge it in the shaken saline solution, ensuring that both sides of the slide pass below the surface of the saline solution. Remove the dip slide, allow to drain for a few seconds, replace it in the sterile container and incubate at 37 ± 1 °C for 16 ± 2 h.

Repeat the procedure for the remaining four specimens.

Carry out a sterility control by submerging a dip slide in sterile saline solution only and incubating as for the test specimens. The test is valid only if no bacterial growth is observed on this dip slide after incubation.

After incubation, remove the dip slide from the container and count the number of bacterial colony forming units (cfu) on both agar types. If the agar is completely covered by bacteria such that individual colonies cannot be distinguished or, if the colonies merge into one another making accurate counting difficult, the result should be recorded as 'too many to count' (TMTC). Occasionally, bacteria growing at the edge of the dip slide will not form the normal disc shaped colony seen in the centre of the slide, but will spread along the edge of the slide, sometimes up to a distance of a few centimetres. Such growth forms are counted as single colonies.

A.5 Expression of results

Express the mean of the five results for each gross sample as the number of cfu to one decimal place. Calculate the standard deviation of each mean.

Report the mean of the five results for each gross sample and the standard deviation of each mean.

Appendix B. Method for the determination of percentage insoluble extract

B.1 Principle

A test specimen is shaken in a closed glass jar under controlled conditions. The resultant liquid is poured through a test sieve and measured portions of the fluid are evaporated before or after filtration to determine total extracted matter, soluble extracted matter and (by subtraction) insoluble extracted matter.

B.2 Apparatus

B.2.1 *Chemical balance.*

B.2.2 *Drying-oven*, ventilated.

B.2.3 *Water bath or sand bath*, etc. for evaporation of filtrate.

B.2.4 *Glass jars*, with liquid tight glass closures, and of capacity approximately 1500 mL.

B.2.5 *Shaking machine*, suitable for rotating one or more glass jars in a vertical plane about their centre, at a constant speed of 60 ± 1 r/min.

B.2.6 *Spiral wire plunger*, as shown in figure 2, made from steel wire 5 mm in diameter and consisting of a flat spiral to the centre of which is connected a rod or a continuation of the steel wire, loaded so that the total mass of the plunger is 0.45 ± 0.01 kg. The spiral consists of three loops, the outer loop being approximately 60 mm in diameter.

B.2.7 *Test sieve*, of 150 μm aperture, in stainless steel, and of 200 mm diameter, complying with BS 410.

[1] For information on the availability of suitable dip slides, write to Customer Information, BSI Linford Wood, Milton Keynes, MK14 6LE.

B.2.8 *Large glass funnel*, into which the test sieve can be fitted.

B.2.9 *Glass filter funnels*, 150 mm diameter.

B.2.10 *Conical flasks*, 1 L capacity to receive strained liquid and conical flasks 500 mL capacity for boiling down.

B.2.11 *Dishes*, stainless steel, nickel, porcelain or heat-resistant glass, for evaporation.

B.2.12 *Filter papers*, 120 mm diameter, double-acid-washed, low ash, retentive for disintegration in extract and 240 mm diameter for filtration[1)].

B.2.13 *Graduated measuring cylinders or volumetric flasks*, capable of measuring 500 mL, 200 mL and 100 mL.

B.3 Reagents

B.3.1 *Methanol*

WARNING. Methanol is a very flammable liquid and the vapour can form explosive mixtures with air and oxygen, the vapour being slightly heavier than air. Methanol is toxic and the effects of absorption of even small amounts may be cumulative over relatively long periods. Methanol may enter the body as vapour (by being inhaled), through the mouth, and through the skin, particularly by way of cuts and abrasions. Precautions should be taken against these hazards. Adequate ventilation is essential and boiling down and evaporation of solutions containing methanol should not be permitted in the open laboratory.

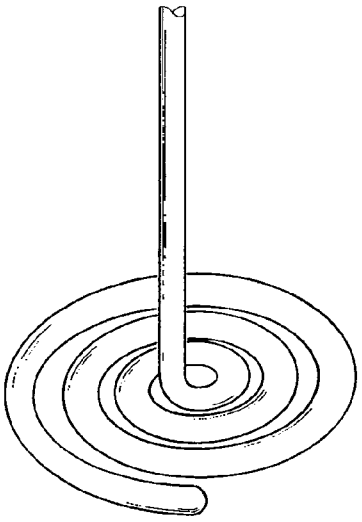

Figure 2. Spiral wire plunger

B.3.2 *Washing solution*, consisting of the following ingredients.

	parts by volume
Ammonia solution approximately 35 % (*m/m*), approximately 0.88 g/mL	12
Distilled water	415
Methanol complying with BS 506 : Part 1	75
Acetone complying with BS 509 : Part 1	100

Mix the distilled water with the ammonia solution, add the methanol and mix. Add the acetone and mix.

NOTE. There is a slight contraction in volume on mixing these ingredients. The solution should be freshly prepared, and cooled to 20 ± 2 °C before use.

In the case of rubberized hair and rubberized fibre, replace the washing solution with water.

B.4 Procedure

B.4.1 ***Extraction***

From the gross sample, take a test specimen in accordance with **4.2**, of approximately 12.5 g weighed to an accuracy of ± 0.05 g in the case of fibre and hair/fibre mixtures, and for all other materials, approximately 25 g, weighed to an accuracy of ± 0.05 g.

Place the test specimen in a clean jar and add 500 mL of washing solution (or water in the case of rubberized hair and fibre) at 20 ± 2 °C. Agitate the specimen with the plunger to remove air bubbles, ensuring that no liquid, fibres, etc. adhere to the plunger when it is removed. Close the jar, secure it in the shaking machine and rotate it continuously for 20 ± 1 min at a constant speed of 60 ± 1 r/min. Take the jar out of the machine, remove the cover and insert the plunger. As soon as the plunger comes to rest, pour the liquid through the test sieve placed in a large funnel, collecting the strained liquid in a clean conical flask. Use the plunger to retain the specimen in the jar, but do not squeeze the specimen with the plunger.

NOTE. If more than one jar has been shaken at the same time, before removing the cover and inserting the plunger, hold the jar in a horizontal position and shake it vigorously by moving it horizontally twice to the left and twice to the right, to avoid any settlement of suspended particles. Take care to avoid allowing any jar to remain standing for more than 1 min to 2 min before the shaking machine is started or before pouring off the liquid.

[1)] For information on the availability of details of suitable filter papers write to Customer Information, BSI, Linford Wood, Milton Keynes, MK14 6LE.

B.4.2 ***Determination of soluble extract***

Transfer 200 mL of the liquid to a 500 mL conical flask and heat (e.g. over a bunsen burner, but not in the open laboratory; see warning note in **B.3.1** regarding methanol) until the volume is reduced to approximately 100 mL. Cool, make up to 200 mL in a graduated cylinder or volumetric flask, and transfer to a 500 mL conical flask.

NOTE 1. The flask in which the liquid was reduced may be used again.

Add a 120 mm diameter, double-acid-washed, retentive, low ash filter paper, torn into small pieces, and shake the flask briskly until the paper has disintegrated.

Filter the mixture through a 240 mm diameter dry qualitative filter paper without suction, refiltering the first runnings. The filtrate should be clear or have only a faint opalescence.

NOTE 2. Losses by evaporation should be avoided. For example, if the liquid is poured into the filter funnel and left there so that filtration can be completed overnight, lower the funnel into the flask which is receiving the filtrate, and cover the filter paper by placing a clock glass or similar object on top of the funnel.

Evaporate 100 mL of the filtrate in a suitable tared dish over steam to dryness. Dry to constant mass at 105 °C to 110 °C by transferring the dish and contents to a well-ventilated drying-oven. Weigh the dish and contents after cooling in a desiccator for approximately 30 min.

B.4.3 ***Determination of total extract***

Transfer, portion by portion, 100 mL of the liquid to a suitable tared dish and evaporate the liquid over steam to apparent dryness. Dry to constant mass at 105 °C to 110 °C by transferring the dish and contents to a well-ventilated drying-oven. Weigh the dish and contents after cooling in a desiccator for approximately 30 min.

B.4.4 ***Calculation and expression of results***

Calculate the insoluble extracted matter i as a percentage of the dry mass of the test specimen, using one of the following equations:

(a) for a 25 g test specimen,

$$i = \frac{2000}{D}(W_2 - W_1);$$

or

(b) for a 12.5 g test specimen,

$$i = \frac{4000}{D}(W_2 - W_1).$$

where

D is the oven-dry mass of the test specimen, determined in accordance with appendix D, expressed as a percentage of the original mass;

W_1 is the oven-dry mass of the soluble extract (in g);

W_2 is the mass of the oven-dry total extract (in g).

Express the results to one decimal place.

Appendix C. Method for the determination of percentage oil

C.1 Principle

A test specimen is extracted with petroleum spirit in a Soxhlet apparatus and the solvent evaporated to determine the percentage oil.

C.2 Apparatus

C.2.1 *Soxhlet extraction apparatus*, complying with BS 2071, of 100 mL capacity, type 2, i.e. with concentric type syphon tube and ground glass joints at the top of the Soxhlet extractor (socket joint) of size 40/38, as specified in BS 572, to accommodate the paper or glass thimble for the specimen.

NOTE. The cone joint size at the bottom of the extractor, fitting into the flask, may be 29/32 or 24/29, as specified in BS 572.

C.2.2 *Extractor flasks*, of 250 mL capacity with ground glass neck size 29/32 or 24/29, as specified in BS 572, to fit the extractor.

C.2.3 *Paper thimbles*, 30 mm × 100 mm or sintered base glass thimbles, 34 mm × 100 mm.

C.2.4 *Glass filter funnel.*

C.2.5 *Filter papers*[1], 120 mm diameter.

C.2.6 *Dishes* (stainless steel, nickel, porcelain or heat-resistant glass for evaporation).

C.2.7 *Controllable heating arrangements*, for Soxhlet extraction.

C.3 Reagents

C.3.1 *Petroleum spirit*, boiling range 40 °C to 60 °C.

C.4 Procedure

From the gross sample, take a test specimen in accordance with **4.2**, of approximately 5 g weighed to an accuracy of ± 0.05 g. Place the specimen in a paper or glass thimble, ensuring that the whole of the test specimen will be covered by the extracting fluid during each cycle of siphoning.

Extract the specimen in the Soxhlet apparatus with petroleum spirit for not less than 10 siphonings at a rate of approximately 10 siphonings per hour. Filter the extract into a tared dish, remove the solvent, dry to constant mass by heating in a well ventilated oven at 105 °C to 110 °C for not less than 2 h and until two successive weighings do not differ by more than 5 % and weigh the oil.

NOTE. It is common practice to control the number of siphonings by timing. This can be satisfactory, but it is reliable only if the rate of refluxing is adequate and maintained (not interrupted by, for example, a power cut). It is recommended that the rate of siphoning is checked from time to time.

[1] For information on the availability of suitable filter paper write to Customer Information, BSI, Linford Wood, Milton Keynes, MK14 6LE.

C.5 Expression of results

Calculate and report the amount of oil o as a percentage of dry mass of the test specimen, determined in accordance with appendix D, using the following equation:

$$o = \frac{p}{D} \times 100$$

where

p is the dry mass of petroleum spirit extract (in g);

D is the oven-dry mass of the test specimen, determined in accordance with appendix D, expressed as a percentage of the original mass.

Appendix D. Method for the determination of dry matter

NOTE. Results of the tests for insoluble extracted matter (appendix B) and oil (appendix C) are required to be expressed as a percentage of the dry mass of the test specimen. This test is therefore necessary in order to determine the dry mass of test specimens.

D.1 Apparatus

D.1.1 *Balance*, capable of weighing to an accuracy of 0.005 g.

D.1.2 *Weighing bottles with lids.*

D.1.3 *Drying-oven*, ventilated.

D.1.4 *Desiccator.* Silica gel, silica gel mixed with aluminium oxide, anhydrous calcium chloride, phosphorus pentoxide or sulphuric acid may be used as desiccant.

D.2 Procedure

Weigh a 5 ± 0.05 g test specimen of the material in a tared weighing bottle fitted with a lid. Dry to constant mass, i.e. until the results of two consecutive weighings do not differ from each other by more than 0.005 g, by removing the lid and heating in the drying-oven at 105 °C to 110 °C. Replace the lid before cooling, or cool in a desiccator for approximately 30 min and then replace the lid before re-weighing.

NOTE. The use of a direct-reading moisture meter or other suitable apparatus is acceptable, provided that the results obtained are periodically checked by the oven-drying method described in this appendix.

D.3 Expression of results

Express the oven-dry mass (D) as a percentage, to the nearest whole number, of the original mass of the test specimen.

Publication(s) referred to

BS 410	Specification for test sieves
BS 506	Methanol for industrial use Part 1 Specification for methanol
BS 509	Acetone for industrial use Part 1 Specification for acetone
BS 572	Specification for interchangeable conical ground glass joints
BS 1425	Cleanliness of fillings and stuffings for bedding, upholstery and other domestic articles Part 2 Specification for feather and/or down fillings and stuffings
BS 2005[1)]	Glossary of terms for fillings for bedding, upholstery and other domestic articles
BS 2071	Specification for Soxhlet extractors
BS 5750[2)]	Quality systems

[3)] Textile Institute Handbook 'Identification of Textile Materials', 7th edition, 1975.

[1)] Obsolescent.

[2)] Referred to in the foreword only.

[3)] Available from The Textile Institute, 10 Blackfriars Street, Manchester M3 5DR.

BS 1425 :
Part 1 : 1991

BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Contract requirements

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.

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British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

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9106—6—0.7k—B

AMD 7788

Amendment No. 1
published and effective from 15 July 1993
to BS 1425 : Part 1 : 1991

Cleanliness of fillings and stuffings for bedding, upholstery and other domestic articles
Part 1. Specification for fillings and stuffings other than feather and/or down

Revised text

2 Definitions

Delete clause **2** entirely and substitute the following.

'2 Definitions

For the purposes of this Part of BS 1425, the following definitions apply.

2.1 gross sample

Of filling or stuffing material. One not less than 0.5 kg in mass, taken for the purposes of testing and/or inspection.

2.2 layered

Of filling or stuffing material. Having been processed to form a coherent layer of generally uniform thickness.

2.3 loose

Of filling or stuffing material. Not having been deliberately formed or constrained into a specific shape.

2.4 secondhand

Of filling or stuffing material. Having been previously used only as a filling or stuffing.

2.5 used

Of filling or stuffing material. Having been previously employed either as a filling or stuffing, or for any other purpose.

Additional definitions relating to this Part of BS 1425 are contained in BS 2005 : 1966.'

AMD 7788/July 1993

5 Cleanliness

At the end of clause **5**, insert the following note.

'NOTE. Filling and stuffing materials should be free from vermin including the eggs, larvae and pupae of insects and parasites.'

AMD 7788/July 1993

6 Marking

Delete item (b) and note 2 entirely and substitute the following.

'(b) A description of the material including its classification in accordance with clause **3**.'

After item (c), insert the following new item.

'(d) The date of manufacture of the material.

NOTE 2. In the case of used or secondhand materials this is the date of reprocessing them into materials as classified in **3.1**.'

AMD 7788/July 1993

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