



THE WOOLMARK COMPANY

WOOLMARK SPECIFICATION

WOOL-FILLED OR LAYERED
BEDDING PRODUCTS

SPECIFICATION IB-2

Effective 1 January 2016

WOOLMARK SPECIFICATION

SPECIFICATION IB-2: 2016

WOOL-FILLED OR LAYERED BEDDING PRODUCTS

PRODUCTS

Woolmark labelling may be applied to the products listed below provided they meet the requirements of this specification.

- **Quilts, comforters, duvets and over-futons**
These products shall have a wool layer between outer layers of woven fabric that may be wool or another fibre (including sleeping bags).
- **Under-quilts, under-blankets and bed pads**
These products shall have a wool layer filling. This category also includes products that have, in addition to the wool layer, a 100% new wool pile fabric cover on one or both sides of the quilt. Such products may have elasticised skirt with which to fit the under-quilt to the mattress.
- **Protective mattress covers**
These products are differentiated from under-quilts and under-blankets. Such products must be quilted and may have a water impermeable layer. The upper side of the mattress cover may not have a pile on the upper layer that must be quilted. These products must have elasticised skirt with which to fit the cover to the mattress.
- **Under-futons**
- **Mattresses incorporating wool layers**
This category includes 'folding mattresses' and 'folding mattresses with a non-wool core' as used in Asia and products with a 100% wool sliver-knit top. If the mattress has a top layer of wool pile fabric, it is not necessary that a wool layer is also present within the mattress structure.
- **Pillows**
This category includes the following products:
 - pillows with a wool filling that may be a wool layer or wool knops
 - pillows with a 100% new wool sliver-knit pile fabric cover. Such products may also have a non-wool filling.Pillows with a conventional wool fabric cover (woven or knitted or non-woven) but a non-wool filling are not eligible for Woolmark.
- **Pillow covers**
These products must be detachable and quilted with a wool layer.

Woolmark Blend labelling may be used on the products listed below where those products contain at least 50% wool blended with a non-wool natural fibre or a bi-component, low melt sheath polyester. The products must be machine washable and meet the other criteria listed in this specification:

- quilts (including sleeping bags)
- under-quilts, under-blankets, futons and under-futons
- mattress covers
- mattress protectors
- bed pads
- pillow covers.

Blends of wool with other core-sheath fibre types (low temperature melt sheath and high temperature melt core) must be submitted to the Woolmark Management Group for approval.

The following products are not eligible for Woolmark Blend labelling:

- sliver-knit pile covers, unless the product has a wool-containing layer that meets the criteria in this specification (in such products, the pile must be 100% wool)
- pillows
- mattresses (not including futon) with wool layers.

Specifications for Woolmark Blend labelled products are the same as those for Woolmark, except where indicated.

Wool Blend labelling may not be used on bedding products covered by this specification.

MANDATORY REQUIREMENTS (ALL PRODUCTS IRRESPECTIVE OF CARE CLAIM)

Property	Test method	Pass level
Woolmark Wool content of filling, layer(s) or pile (as appropriate)	155	Pure New Wool (see specification F-1, F-2, F-3 or F-4 for details as appropriate)
Woolmark Blend Fibre content of filling or layer(s) Wool content: minimum Non-wool fibre content:	155	50% new wool Up to 50% new fibre (see specification sheet F-5)
Product dimensions		Equal to or greater than the stated dimensions on the label.
Weight of wool in filling or layer (g/m²: minimum)		
<i>Quilts, comforters, duvets, over-futons</i>		
Normal weight		350
Lightweight quilts,		250
Super lightweight		150
<i>Under-quilts, under-blankets and bed pads</i>		
With plain covers		500
With pile covers		300 (wool layer), 200 (pile)
<i>Under-futons: wool filled (used instead of a mattress)</i>	13	1000
<i>Mattresses – wool containing layer</i>		
One side or both sides – each		500
Wool pile mattress top		500
<i>Protective mattress cover (quilted)</i>		150
<i>Pillows</i>		
With plain covers		1500
With wool-filled quilted covers		1000
<i>Pillow covers</i>		150
<i>Felted layers (Woolmark only)</i>		600
Non recoverable extension (% maximum)	248	4
DCM extractable matter of wool in filling or layer (and pile if appropriate) (%: maximum)	136	Woolmark: dichloromethane: 1.0 Woolmark Blend containing polyester, methanol 1.0 All other Woolmark Blend: dichloromethane: 1.0
Vegetable matter in wool in filling or layer (%: maximum)	IWTO 19	0.7
Mean fibre length in wool layer, under body products only (mm: minimum)		
Mattress	IWTO-05	35
Futons		60
Products other than Mattresses and Futons		45
Entanglement and Felting (grade) (1 x 7A cycle)	274	Not worse than 3–4

- All tables must also be read in conjunction with the notes that follow

NOTES

1. Product dimensions

Actual product dimensions must be measured and must be equal to (or greater than) the stated dimensions on the label.

2. Woolmark TM155: Wool content

Woolmark Blend labelled products must be machine washable.

3. Woolmark TM13: Weight of wool in filling or layer

Woolmark Blend mattresses—the wool containing layer(s) must contain a minimum of 500gm⁻² of wool (eg for 80% wool content layer; total layer weight 625gm⁻²).

Super lightweight and Lightweight products must be permanently labelled to indicate lightweight or suitable for summer use.

Products with a pure new wool felted layer must have a minimum wool weight of 600gm⁻².

4. Woolmark TM248: Non-recoverable extension

Felted wool layers only. The performance of felted wool layers is closely related to the construction and the felting or finishing of the fabric. Problem fabrics may include one or more of the following elements: (a) insufficient consolidation and (b) over-raised surface.

The general effect of these parameters is a reduction in product durability and high values of non-recoverable extension. If a test specimen fails before a load of 98.1N is reached, the specimen must be considered as a failure.

5. Woolmark TM136: DCM extractable matter

In the case of Woolmark Blend products containing polyester, the solvent used must be methanol since dichloromethane extract will give an incorrect (high) result due to extraction of low molecular weight polymer from the polyester. For all other Woolmark Blend products, dichloromethane must be used.

Knop-filled products

Wool knops that have been processed with certain types of additive treatment may give results greater than the permitted maximum, as these additives may be removed in addition to the oils present. In these cases, a figure greater than the maximum of 0.5% may be allowed providing the sample does not smell of oil.

6. IWTO-05 and IWTO-19

The latest version of IWTO test methods shall be used.

7. Woolmark TM274: Entanglement and felting

This test is applied to knop-filled pillows only.

**ADDITIONAL MANDATORY REQUIREMENTS FOR PRODUCTS (INCLUDING MATTRESSES)
WITH A 100% NEW WOOL PILE FABRIC COVER**

Property	Test method	Pass level
Surface pile weight: minimum (gm ⁻² : minimum)	277	Sliver knit products: 250 All other fabrics: 200
Pile density function (p ² /100t: minimum)	285	80
Pile height (mm: minimum)	279	Sliver knit products: 7 All other fabrics: 5
Appearance retention (appearance change: pile)	287	Acceptable
Percentage pile (%: minimum)	289	100
Colourfastness to rubbing – wet and dry (grade: minimum)	165	3–4

- This table must be read in conjunction with the notes that follow.

NOTES

1. Labelling

Products with a pure wool pile may be labelled 'Pure New Wool Pile' or 'Pure New Wool Filling'.

2. Woolmark TM277: Surface pile weight

No additional note.

3. Woolmark TM285: Pile density function

Applicable to under-body products only.

4. Woolmark TM279: Pile thickness

No additional note

5. Woolmark TM287: Appearance retention

Determined after three dry clean cycles according to ISO 3175 'Normal'. In the absence of the equipment to conduct ISO3175, three commercial dry clean test (CDT) cycles may be used instead.

6. Woolmark TM289: Percentage pile

In the case of under-body products, the use of a no-pile area for a pillow is permitted. The surface pile weight must be calculated on the pile area only. All such samples must be submitted to The Woolmark Management Group for approval.

7. Woolmark TM165: Colourfastness to rubbing

This test is required only for colour products darker than 1/12 standard depth.

**ADDITIONAL MANDATORY REQUIREMENT FOR DRY CLEAN ONLY PRODUCTS
CARE CLAIM: DRY CLEAN ONLY**

Property	Test method	Pass level
Total dimensional change (% maximum)		Product must not shrink below stated product dimensions, or Width : -5 < DC Length: -5 < DC
Number and type of cycles: 3 × ISO3175 Normal or CDT		
Appearance after three dry clean cycles: pile and/or filling		Acceptable

- This table must be read in conjunction with the notes that follow.

NOTES

1. Test Procedure

Three dry clean cycles according to ISO 3175 'Normal' or equivalent for the commercial dry clean test (CDT).

Actual product dimensions must be measured and must be equal to (or greater than) the stated dimension on the label. If a sample of the product is used in the test, the dimensions of suitable markings on the specimen may be used to assess dimensional change in length and width.

-5 < DC indicates that the shrinkage should not be greater than 5%.

It is recommended that the sample size for Woolmark TWC-TM31, CDT is a single bed size product (or its equivalent) but samples of 1.0 × 1.0m will be accepted. In the case of pillows, a complete product must always be used.

2. Appearance after dry clean

'Acceptable' indicates a minimal level of fibre clumping, felting and consolidation after dry cleaning.

Filling. In assessing the acceptability of a product for a dry clean only, hand wash or machine wash claim, the appearance of the filling before and after the specified cleaning or washing cycles will be considered.

Products with a pile fabric cover. In assessing the acceptability of a product for a dry clean only, hand wash or machine wash claim, the surface appearance before and after the specified cleaning or washing cycles will be considered.

ADDITIONAL MANDATORY REQUIREMENTS FOR HAND WASHABLE PRODUCTS
CARE CLAIM: Hand wash – flat dry or hand wash – line dry

Property	Test method	Pass level
Relaxation dimensional change (%: maximum) 1 × 7A cycle	31	Product must not shrink below stated product dimensions or Width: -4 < DC Length: -4 < DC
Felting dimensional change (%: maximum) 1 × 7A cycle	31	Width: -5 < DC Length: -5 < DC
Knop filled pillows only Total dimensional change (%: maximum) 2 × 7A cycle	31	Width -6 < DC Length -6 < DC
Colourfastness to wet alkaline contact Change of colour (grade: minimum) Stain wool (grade: minimum)	174	3-4 4
Colourfastness to hand washing Change of colour (grade: minimum) Stain wool (grade: minimum)	250	3-4 4
Afterwash appearance of filling 2 × 7A cycles	–	Acceptable
Afterwash appearance of pile 2 × 7A cycles	287	Acceptable
Entanglement and felting (grade) 2 × 7A cycles	274	Not worse than 3-4

NOTES

1. Woolmark TM31: Dimensional stability

-5 < DC indicates that the shrinkage should not be greater than 5%.

For products other than knop-filled pillows, only relaxation and felting dimensional change are measured. If a sample of the product is used in the test, the dimensions of suitable markings on the specimen may be used to assess dimensional change in length and width.

For knop-filled products, 2 × 7A cycles are conducted and total dimensional change is measured.

2. Woolmark TM174: Colourfastness to wet alkali contact—

Multi-coloured products only.

3. Woolmark TM250: Colourfastness to hand washing

This test applies to coloured products only.

4. Woolmark TM287: Afterwash appearance of pile

Products with a pile fabric cover. In assessing the acceptability of a product for a dry clean only, hand wash or machine wash claim, the surface appearance before and after the specified cleaning or washing cycles will be considered. For testing of products with a pile fabric cover only, acceptable is a satisfactory (minimal) afterwash level of fibre clumping, felting and consolidation.

5. TM274: Entanglement and felting

This test is applicable to knop-filled pillows only.

**ADDITIONAL MANDATORY REQUIREMENTS FOR MACHINE WASHABLE PRODUCTS.
CARE CLAIM: machine wash – flat dry or machine wash – line dry**

Property	Test method	Pass level
Relaxation dimensional change (%: maximum) 1 × 7A cycle	31	Product must not shrink below stated product dimensions, or Width: –4 < DC Length: –4 < DC
Felting dimensional change (%: maximum) 1 × 5A cycle	31	Width: –5 < DC Length: –5 < DC
Knop-filled pillows only Total dimensional change (%: maximum) 3 × 7A cycles	31	Width: –6 < DC Length: –6 < DC
Entanglement and felting (grade) 3 x7A cycles	274	Not worse than 3–4
Colourfastness to wet alkaline contact Change of colour (grade: minimum) Stain wool (grade: minimum) Stain other fibre (main non-wool fibre in blend): minimum	174	3–4 4 3–4
Colourfastness to machine washing Change of colour (grade: minimum) Stain wool (grade: minimum) \ Stain other fibre (main non-wool fibre in blend): minimum	193	3–4 4 3–4
Afterwash appearance of filling (1 × 7A + 1 × 5A cycle) Products other than knop filled pillows	–	Acceptable
Afterwash appearance of pile (1 × 7A + 1 × 5A cycle) Products with a pile fabric cover only	287	Acceptable

- This table must be read in conjunction with the notes that follow.

NOTES

1. Woolmark TM31: Dimensional stability

–5 < DC indicates that the shrinkage should not be greater than 5%.

It is recommended that the sample size for Woolmark TWC-TM31, CDT is a single bed size product (or its equivalent) but samples of 1.0×1.0m will be accepted. In the case of pillows, a complete product must always be used.

If the care claim required is machine wash or tumble dry, then the product to be labelled ‘Tumble dry’ must be sent to the local office of the Woolmark Management Group, which will submit the product to the designated Woolmark laboratory for testing and assessment of compliance to the appropriate specification. The product must be tumble dried after each wash cycle (7A or 5A) required under the claim ‘Machine washable’.

2. Products other than knop-filled pillows

Only relaxation and felting dimensional change are measured. If a sample of the product is used in the test, the dimensions of suitable markings on the specimen may be used to assess dimensional change in length and width.

3. Knop-filled pillows

Only total dimensional change is measured using 3 × 7A cycles.

In assessing the acceptability of a product, the appearance before and after the washing and drying cycle will be considered. The optional care claim ‘Tumble dry’ is not applicable to wool-layered mattresses or wool layers for use in mattresses.

4. Woolmark TM174: Colourfastness to wet alkali contact—

Multi-coloured products only.

5. TM193: Colourfastness to machine washing

This test applies to coloured products only.

Testing carried out according to Part A using standard detergent without perborate. Additional labelling requirements must be observed to prevent problems that could arise when a detergent containing bleach is used during machine washing of the bedding product. In this case, all tickets and labels attached to products must carry an advisory statement: 'Wash using a Woolmark approved detergent' (or similar). Full details of these additional requirements are available from the Woolmark Management Group.

6. TM274: Entanglement and felting

Knop-filled pillows only.

7. TM287: Afterwash appearance of pile

Products with a pile fabric cover. In assessing the acceptability of a product for a dry clean only, hand wash or machine wash claim the surface appearance before and after the specified cleaning or washing cycles will be considered. For testing of products with a pile fabric cover only (including a non wool filling)', 'acceptable is a satisfactory (minimal) after-wash level of fibre clumping, felting and consolidation.

ADDITIONAL REQUIREMENTS – TEST AND REPORT ONLY

Property	Test method	Advisory level
Fibre bulk (cm ³ /g)	265	≥ 27
Filling bulk (cm ³ /g)	272	≤ 65
Filling performance • Bulk after TM274 (cm ³ g ⁻¹ : minimum) • Bulk loss after TM274 (%: maximum)	272/274 272/274	50 30
Migration of fibre from the filling through the shell fabric	266	Pass
Percentage of kemp (fully medullated) fibre (%: maximum)	IWTO-8	5

- This table must be read in conjunction with the notes that follow.

NOTES

1. Woolmark TM265: Fibre bulk

It is advised that for carded fillings, wool finer than 30µm should be shrink-resist treated. For under-body bedding, it is advised that wools coarser than 27µm will give better resilience in use.

2. Woolmark TM272: Filling bulk

This test is conducted on knop-filled pillows only.

The performance characteristics of knop filling for pillows are assessed by comparison of the knop before and after the entanglement and felting test. This difference is minimised if the minimum bulk and maximum bulk loss requirements are met. It is advised that to achieve the necessary performance, wools will need to be shrink-resist treated.

3. Woolmark TM274: Entanglement and felting

This test is conducted on knop-filled pillows only.

4. Woolmark TM266: Fibre migration

It is advised that a fibre migration test should be carried out on all finished products.

(Machine-washable products will be evaluated by the Woolmark Management Group to assess fibre migration during washing.)

In general, high bulk wools give greater resistance to migration but the finer the fibre, irrespective of bulk, the more likely it is to migrate. Blends of wool containing kemp (fully medullated) or very coarse fibre should be avoided.

Cover fabrics of 110–150gm⁻² are common weights selected, and if fabric sets of more than 300 ends and 300 picks per 10cm are used, these should be suitable. It is advised that the use of cover materials containing predominantly natural fibres (ie cotton or wool) will assist in maximising the moisture management benefits of wool-filled bedding.

5. IWTO-8: Determination of kemp

Kemp is generally a chalky-white, brittle, weak fibre that may be mixed with normal fibres in a sheep's wool fleece. Kemp fibres are often detached from the skin. This hair is not desirable in a fleece as it does not accept dye, minimising both the quality and the value of the wool. It is easily seen, as it does not look like normal wool fibres.

Kemp is medullated fibres having abnormally large diameters.

Test methods for the determination of medullation (med) and kemp fibres by projection microscope may be used for the acceptance testing of commercial shipments of wool and other animal fibres, but caution is advised because only a few types of animal fibres have been subjected to inter-laboratory tests to ascertain the precision of tests for med and kemp fibres by this test method. Comparative tests may be advisable.

In case of a dispute arising from differences in reported test results when using test method D2968 for acceptance testing of commercial shipments, the purchaser and the supplier should conduct comparative tests to determine if there is a statistical bias between their laboratories. Competent statistical assistance is recommended for the investigation of bias. As a minimum, the

two parties should take a group of test specimens that are as homogeneous as possible and which are from a lot of material of the type in question. The test specimens should then be randomly assigned in equal numbers to each laboratory for testing. The average results from the two laboratories should be compared using student's t-test for unpaired data and an acceptable probability level chosen by the two parties before testing is begun. If a bias is found, either its cause must be found and corrected, or the purchaser and the supplier must agree to interpret future test results in view of the known bias.

Knowledge of the incidence of med fibres and kemp fibres in wool and other animal fibres is of importance to manufacturers of woven or knitted fabrics because of the apparent dye resistance and light reflectance qualities of these fibres. This is not to imply that all kemp fibres will resist dye and all med fibres will accept dye normally. In practice, a proportion of kemp fibres will appear normal after dyeing and a proportion of med fibres will appear chalky white after dyeing. From the perspective of visual and aesthetic problems, medullated fibres with an abnormally large diameter and a high degree of medullation are probably the worst kind.

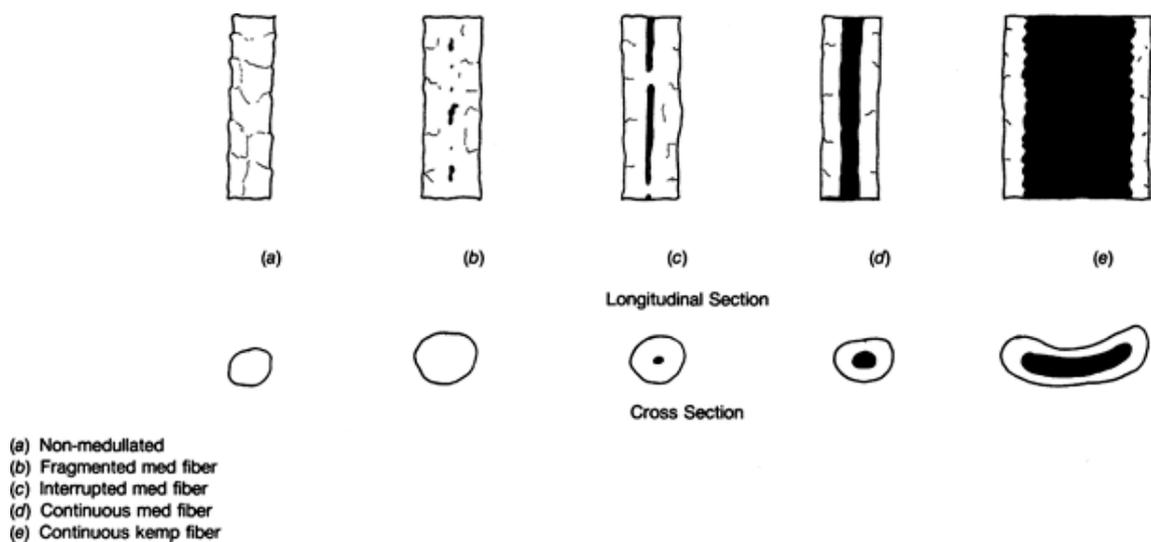


Figure 1 Kemp fibres are highly medullated and have high fibre diameter. They may also have a flattened appearance.

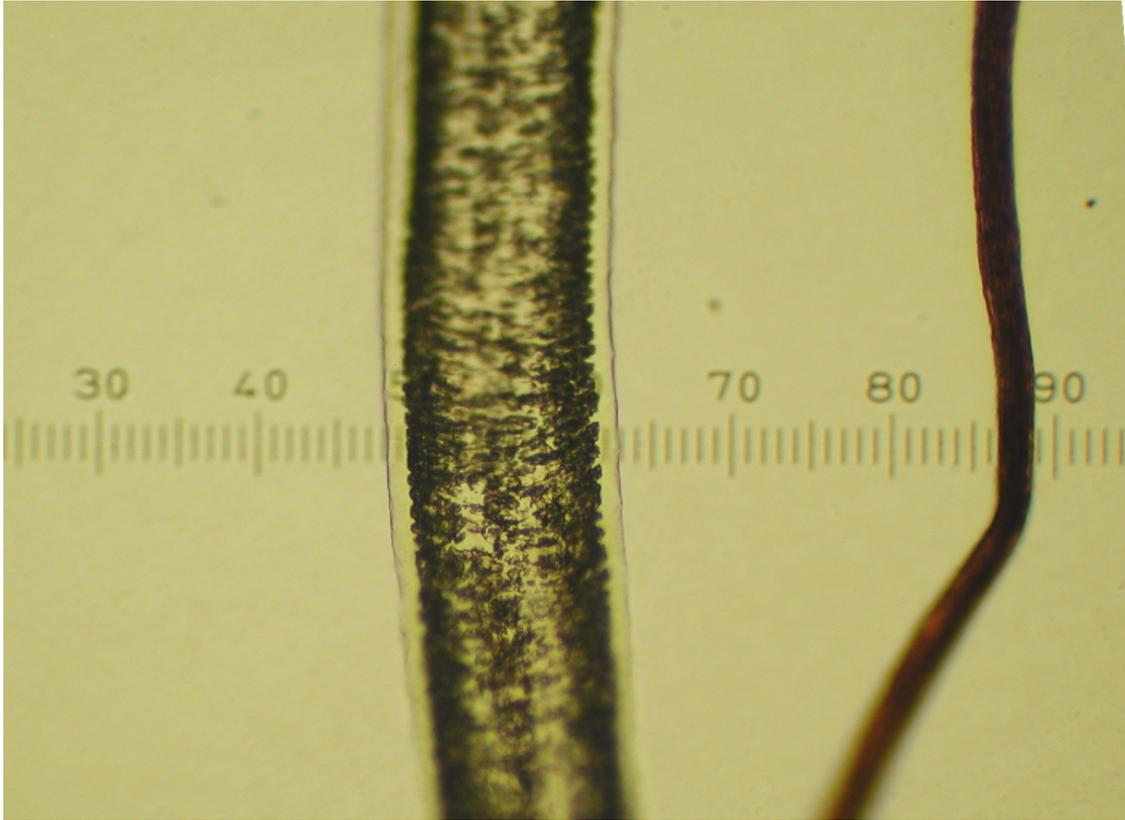


Figure 2 The fibre described as kemp is on the left. The diameter of this fibre is much larger than the more normal wool fibre. Kemp may also be observed to have a different surface structure.

ADDITIONAL NOTES

1. INTERVENING LAYERS

1.1 Mattresses

There must be no intervening layer (other than those permitted in 1.2 and 1.3, below) between the outer cover fabric and the wool layer. However, to assist in manufacture, a secondary layer may be attached to the base of the wool layer.

1.2 Products other than mattresses

There must be no intervening layer (other than those permitted in 1.3, below) between the outer cover fabric and the wool filling. However, to assist in manufacture of the final product, a retaining scrim (or scrims) may be used with wool layers.

The maximum weight of this scrim material allowed is:

- 30g/m² of cotton or other cellulosic fibre
- 20g/m² of other non-wool fibre.

1.3 All products

Lightweight materials (maximum weights as in 1.2, above) may also be used to reduce problems of fibre migration, as long as they are not fibrous batting and form no part of the filling.

2. FIBRE DIAMETER

For under-body bedding, it is advised that wools coarser than 27µm will give better resilience in use.

3. DRY FELTING – UNDER-QUILTS AND UNDER-FUTONS

It is advised that wools for use in mattresses with a pile fabric top, under-quilts, under-futons and pillows may have to be shrink-resist treated to avoid dry felting of the filling during use. It is advised that for carded fillings, wool finer than 30µm should be shrink-resist treated to prevent dry felting

4. DRY CLEAN, HAND WASHABLE OR MACHINE WASHABLE PRODUCTS

4.1 Sample for testing

Sample products **must** be submitted to the Woolmark Management Group for consideration.

If the fibre for carded wool fillings has been correctly selected and processed, all products should be satisfactory for dry cleaning. However, if a product is to be labelled as machine washable, wool fillings must be shrink-resist treated. Various loose stock shrink-resist processes are available that may or may not be suitable for any particular type of wool fibre to be used in the filling. It is advised that any process is carefully checked for degree and levelness of application. In addition, after washing, the specimens will be examined for seam puckering and external appearance change.

4.2 Appearance after washing or dry cleaning

4.2.1 Filling

In assessing the acceptability of a product for a dry clean only, hand wash or machine wash claim, the appearance of the filling before and after the specified cleaning or washing cycles will be considered.

4.2.2 Appearance of products with a pile fabric cover

In assessing the acceptability of a product for a dry clean only, hand wash or machine wash claim, the surface appearance before and after the specified cleaning or washing cycles will be considered.

4.3 Non-wool primary and ticking covers

4.3.1 Filled bedding

Dimensional change of a washable product may be caused by dimensional change of one component of the product; the component exhibiting dimensional change could be either the wool filling or the non-wool primary cover (or may be caused by the stitching). Dimensional change is measured for the complete product and no distinction is made between change caused by any individual component.

In addition, the use of a synthetic fibre primary cover may detract from the moisture management comfort properties of a wool-filled product and, depending on the weight, thickness and moisture management properties of the overall product, may result in refusal of the product to carry the Woolmark branding.

4.3.2 Mattresses

The use of a synthetic fibre ticking fabric may detract from the moisture management comfort properties of a wool layered product and, dependent on the weight, thickness and moisture management properties, may result in refusal of the product to carry the Woolmark branding.

5. **QUILTING**

The fibre filling must be secured by stitching or other means so that it does not move about within the product. The distance between lines of stitching should normally be less than 25cm with lines of stitching in two directions. This is not applicable to mattresses or pillows without a quilted primary cover.

6. **PILLOWS**

Inner bags to contain the wool filling (inner bags containing filling held inside a primary cover) are permitted if they are of mesh (ie open) structure.

Some products include a quilted primary cover with a fibrous filling. If this type of cover is used, it must contain a layer of wool (or wool rich blend) only.

7. **TUMBLE DRY AS PART OF THE MACHINE WASHABLE CARE CLAIM**

Any product to be labelled 'Tumble dry' must be sent to the local office of the Woolmark Management Group, which will submit the product to the designated Woolmark laboratory for testing and assessment of compliance to the appropriate specification. The product must be tumble dried after each wash cycle (7A or 5A) required under the claim machine washable.

In assessing the acceptability of a product, the appearance before and after the washing and drying cycle will be considered. The optional care claim 'Tumble dry' is not applicable to wool layered mattresses or wool layers for use in mattresses.

8. **APPEARANCE RETENTION AFTER USE**

Felting can occur during use (in addition to that during cleansing). It is essential that all products exhibit an acceptable degree of appearance retention during use, irrespective of care claim. To achieve satisfactory appearance after use, especially in high pile height products, it may be necessary to use shrink-resist treated wools.

9. **DOUBLE-SIDED MATTRESSES**

10. **(ie mattresses with a winter-use side and a summer-use side)**

If the mattress has two use sides, the wool layer may be directly beneath either or both sides (condition in Note 1.1 applies). If a Woolmark or Woolmark Blend layer is only used on one side (e.g. the winter use side), the other side may use a non-Woolmark layer (e.g. the summer use side may use a cotton layer).

11. **FOLDING MATTRESSES WITH A NON-WOOL CORE (as used in Asia)**

The outer folding layer must be of Pure New Wool and the product must be labelled 'Pure New Wool layer'.

12. **MATTRESS WITH A PILE FABRIC TOP LAYER**

If the mattress has a top layer of wool pile fabric, it is not necessary that a wool layer is also present in the mattress structure.

APPENDIX:

Specifications for additional claims

ADDITIONAL CLAIM: Pure Merino Wool

PRODUCTS

Pure Merino Wool may be applied to all **Woolmark Labelled Bedding** products, meeting the criteria below in addition to those detailed in this specification.

Pure Merino Wool must not be used on **Woolmark Blend** labelled products.

Pure Merino Wool additional criteria

Property	Test method	Requirements
Wool content	155	Pure New Wool as indicated in Specifications F-1, F-2, F-3, F-4
Mean wool fibre diameter (µm: absolute maximum)	22 or 23 or 24	22.5µm

NOTES

1. The mean fibre diameter is determined from the yarn (or fibre if appropriate) removed from the fully finished product.

The fibre diameter requirement (which includes sampling and testing tolerances) is applicable at the end product stage. It is known that the mean fibre diameter can increase during textile processing as a result of the preferential loss of finer fibres. It is not known how much change will occur for any particular set of circumstances but in order to meet the end product requirement, it is advised that wools with diameters closer to 21.5–22.0µm be chosen at the raw material stage.

In cases of dispute, the result from Woolmark TM24 must be accepted.

ADDITIONAL CLAIM: Australian Merino

PRODUCTS

- Australian Merino may be applied to all Woolmark labelled products meeting the criteria detailed in this specification.
- All requests for products to be included in the Australian Merino program for bedding products, carpets and rugs must be submitted to the Woolmark Management Group for consideration.

Australian Merino additional criteria

Property	Test method	Requirements
Wool content	155	Pure New Wool
Mean wool fibre diameter (μm : absolute maximum)	22 or 23 or 24	22.5 μm
Australian Merino wool content: (%: minimum)	Wool importer's or wool supplier's certificate to be submitted by licensee as confirmation	50%

NOTES

The wool must be from pure Merino sheep and written confirmation must be supplied.

ADDITIONAL CLAIM: Gold Label

PRODUCTS

Gold Label may be applied to the following **Woolmark labelled** products meeting the criteria detailed in this specification:

- quilts, comforters, duvets and over-futons
- under-futons, under-blankets and mattress overlays.

Gold Label must not be used on **Woolmark Blend** labelled products.

All requests for products to be included in the Gold Label program for quilts, comforters, duvets, under-blankets, mattress overlays, over-futons and under-futons must be submitted to the Woolmark Management Group for consideration.

Gold Label: additional criteria

Property	Test method	Requirements
Wool content	155	Pure New Wool
Australian Merino wool content: (%: minimum)	Wool importer's or wool supplier's certificate to be submitted by licensee as confirmation	50%
Non-wool filling	–	No polyurethane padding permitted
Machine wash and flat dry or line dry: minimum mandatory care claim (all countries except Australia and New Zealand)	31	Products must meet Woolmark requirements for machine-wash quilts, under-blankets, mattress overlays and futons
Machine wash and tumble dry: minimum mandatory care claim (Australia and New Zealand)	31/254	Product must meet requirements for machine wash and tumble dry quilts, under-blankets, mattress overlays and futons shown below.

- All tables must also be read in conjunction with the notes that follow.

OPTIONAL CARE CLAIM: MACHINE WASH AND TUMBLE DRY

All products submitted for approval for the use of the Woolmark or Woolmark Blend label must be submitted to the Woolmark Management Group (WMG). All Information on constructional parameters for submitted products must be included with products for this care claim. Testing and approval or rejection of such products will be arranged by the WMG.

1. SCREENING TEST

Property	Test method	Pass level
Relaxation dimensional change (%: maximum) No. and type of wash and dry cycles	31/254	Width: 4 < DC Length: 4 < DC 1 × 7A + 1 × TD
Felting dimensional change No. and type of wash and dry cycles	31/254	-- 1 × 5A + 1 × TD
Total dimensional change (%: maximum)	31/254	Width: 5 < DC Length: 5 < DC
Performance after washing or tumble drying: filling	–	Acceptable

2. COMMERCIAL WASH AND TUMBLE DRY TEST (CWT)

Property	Test method	Pass level
Total dimensional change (% shrinkage: maximum) Number and type of cycles: 3 × CWT		Length: 5 < DC Width: 5 < DC

- This table must be read in conjunction with the notes that follow.

NOTES

1. Woolmark TM31: Dimensional stability

–5 < DC indicates that the maximum shrinkage allowable is 5%.

Acceptable indicates a minimal level of after wash fibre clumping, felting and consolidation.

2. CWT test method

A machine with a gentle action wool cycle must be used.

A Woolmark detergent at the recommended dose is preferred.

The following cycle parameters are used for the CWT cycle:

Warm wash	10 minutes
Spray rinse	3 minutes
Spin	2 minutes
Rinse cold	4 minutes
Spin	2 minutes
Rinse cold	3 minutes
Spin	6 minutes
Tumble dry (warm setting)	30 minutes

The CWT test must be performed on all products for which the care claim 'Machine wash and tumble dry' is required. To be approved, the product must meet the noted specifications.

The test result from the CWT will be used to make a final decision regarding the acceptability of a product with a 'Machine wash and tumble dry' care claim into the Gold Label program.

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