



THE WOOLMARK COMPANY

WOOLMARK SPECIFICATION

FLAT WOVEN, PILE WOVEN
AND PRESSED FELT
APPAREL PRODUCTS

SPECIFICATION AW-1

Effective 1 January 2016

WOOLMARK SPECIFICATION

SPECIFICATION AW-1: 2016

FLAT WOVEN, PILE WOVEN AND PRESSED FELT APPAREL PRODUCTS

PRODUCTS

The **Woolmark**, **Woolmark Blend** or **Wool Blend** logos may be applied to the following products made from flat woven fabric:

- coats (including waistcoats)
- suits (ie jacket plus trousers)
- trousers
- dresses
- kimonos
- nightwear (excluding dressing gowns)
- accessories (hats, shawls, scarves, gloves, ties)
- jackets
- costumes (ie jacket plus skirt)
- skirts
- dressing gowns
- shirts and blouses.

Pressed felt, pile garment shells or pile woven fabric

The Woolmark logo only may be applied to these products. The Woolmark Blend and Wool Blend logos **must not** be used.

Accessories

Decisions on the suitability of accessories other than a hat, shawl, scarf, glove or tie shall be made by The Woolmark Management Group.

SPECIFICATIONS

- Specifications for Woolmark Blend and Wool Blend branded products are the same as those for Woolmark branded except where indicated.
- **Care claim.** If the product care claim (words or symbols) is for both 'Dry clean' and 'Hand wash', the product shall meet both claim requirements.
- The term 'Blend' used in this specification includes both Woolmark Blend and Wool Blend.

All products

Property	Test method	Flat woven or pressed felt products			Woven pile products
		Pass level			
		1 Suits, trousers	2 Coats, jackets, costumes, skirts, dresses, kimonos, dressing gowns, accessories	3 Shirts, blouses, nightwear	4 Garment shell
Wool content (minimum)	155	Woolmark Woolmark Blend Wool Blend	100% 50% 30%	Pure New Wool Specification F-5 Specification F-7	Woolmark Blend and Wool Blend are not applicable
Garment make-up quality	288	Acceptable			
Surface pile weight (g/m ² : minimum)	15	–			220
Tensile strength Warp and weft directions (N: minimum)	4	196 (>150g/m ²) 177 (≤150g/m ²)	98	147	NA
Colourfastness to light (Grade: minimum) Not applicable to nightwear	5	Darker than 1/12 standard depth			4
		Lighter than, or equal to, 1/12 standard depth			3
		Bright and pastel colours			
		Darker than 1/12 standard depth			3
		Lighter than, or equal to, 1/12 standard depth			2–3
Colourfastness to rubbing: dry Stain (minimum) Products darker than 1/12 standard depth only	165	3–4			

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

NOTES

1. Woolmark TM155: Wool content

The wool content of Woolmark products is fully described in Specifications F-1 to F-4.
The wool content of Woolmark Blend products is fully described in Specification F-5.
The wool content of Wool Blend products is fully described in Specification F-7.
All pile products must have a pure wool pile but the backing material may be manufactured of an alternative material.

2. Woolmark TM288: Garment appearance

If seconds quality product with minor faults is deemed by The Woolmark Company to be acceptable for testing this test must not be performed.

3. Woolmark TM15: Surface pile weight

This property is only measured on pile products.

4. Woolmark TM04: Tensile strength

Both the warp and weft directions must meet the specification.
Tensile strength measurements are not required for accessories.

5. Woolmark TM5: Colourfastness to light

5.1. Undyed and bleached white product must not be evaluated.

The specifications for colourfastness to light are not applicable to nightwear.

5.2. For products sold in Australia and South Africa, colourfastness to light, blue reference grade 5 is required for shades darker than 1/3 standard depth and grade 4 for shades between 1/3 and 1/12 standard depth.

5.3. Naturally coloured wool:

Such wools may exhibit poor colourfastness to light. However, the product may carry the Woolmark or Woolmark Blend providing the following text (or similar) is used on the ticket: 'It is an inherent feature of some naturally coloured wools that the colour may fade.'

5.4. **Bright and pastel colours:**

Only the specific shades given on The Woolmark Company shade reference card - Bright & Pastel Colours and intermediate shades at maximum brightness are included. No other shades will be classed as bright or pastel shades without prior approval by the Woolmark Management Group. Products that exhibit bright and pastel colours and do not meet the required levels for light fastness may be submitted to the Woolmark Management Group for evaluation. The Woolmark Management Group may approve shades of low light fastness where unique colours are used.

6. **TM165: Dye fastness**

This test is not required on products lighter in shade than 1/12 standard depth.

7. **Suits and costumes**

Component items made from different fabrics. The individual components must be treated as separate garments and be evaluated according to the appropriate specification.

Products with a 'Dry clean only' care claim

Property	Test method	Flat woven or pressed felt products			Woven pile products
		Pass level			
		1 Suits, trousers	2 Coats, jackets, costumes, skirts, dresses, kimonos, dressing gowns, accessories	3 Shirts, blouses, nightwear	4 Garment shells
Dimensional change (% maximum)	ISO 3175	-3% < DC < 3% in warp and weft			
Number of cycles		3 x ISO3175 Normal or CDT			
Appearance after dry cleaning	281	Acceptable			
Colourfastness to water	6				
Change of colour (grade: minimum)		3-4			
Stain wool (grade: minimum)		3			
Stain cotton (grade: minimum)		3			
Stain other fibre (grade: minimum)		3 (for blend only)			NA

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

NOTES

1. ISO 3175: Dimensional stability to dry cleaning

- In the event that equipment for ISO 3175 *Normal* testing is not available, three commercial dry clean tests (CDT) is a suitable alternative.
- For all dimensional stability testing, 'Shrinkage' is denoted by a negative (-) value and an 'extension' by a positive (+) value.
- -3% < DC < 3% indicates that the shrinkage must be less than -3% and the extension must be less than +3%.

Appearance after dry cleaning

The garment appearance after dry cleaning shall be rated according to the criteria in Woolmark TM281: Afterwash appearance of woven fabrics and garments.

2. Woolmark TWC-TM6: Colourfastness to water

Undyed and bleached white products are not to be evaluated.

'Stain other fibre' is defined as the most severely stained fibre in the adjacent fabric and is required for Woolmark Blend only.

Products with a 'Hand wash' or 'Hand wash or Dry clean' care claim

Property	Test method	Flat woven or pressed felt products			Woven pile products
		Pass level			
		1 Suits, trousers	2 Coats, jackets, costumes, skirts, dresses, kimonos, dressing gowns, accessories	3 Shirts, blouses, nightwear	4 Garment shells
Dimensional change - relaxation	31				
Width		-3 < DC	-3 < DC	-3 < DC	-3 < DC
Length)		-3 < DC	-3 < DC	-3 < DC	-3 < DC
No. and type of wash cycles		1 x 7A	1 x 7A	1 x 7A	1 x 7A
Dimensional change - felting	31				
Width		-	-	-	-
Length		-	-	-	-
Differential cuff edge		-1 < DC < +1	-1 < DC < +1	-1 < DC < +1	-1 < DC < +1
No. and type of wash cycles		1 x 7A	1 x 7A	1 x 5A	1 x 7A
Dimensional change - total	31				
Width		-3 < DC	-3 < DC	-3 < DC	-3 < DC
Length		-3 < DC	-3 < DC	-3 < DC	-3 < DC
Colourfastness to hand washing	250				
Change of colour (grade: minimum)				3 – 4	
Stain wool (grade: minimum)				4	
Stain other fibre (grade: minimum)			3 – 4 (for blend only)	NA	
Colourfastness to wet alkaline contact	174				
				Multicoloured products only	
Change of colour (grade: minimum)				3–4	
Stain wool (grade: minimum)				4	
Stain other fibre (grade: minimum)			3–4 (for blend only)	NA	

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

NOTES

- Woolmark TM31: Dimensional stability**
-3 < DC indicates that the shrinkage of the product in washing must not exceed 3%.
-1 < DC < +1 extension must not exceed 1% and shrinkage must not exceed 1%.
- Woolmark TWC TM-250: Colourfastness to hand washing**
Undyed and bleached white products are not to be evaluated.
'Stain other fibre' is defined as the most severely stained fibre in the adjacent fabric.
- Woolmark TM174: Colourfastness to wet alkaline contact**
Applied to multicoloured products only.

Products with a 'Machine wash' care claim

Property	Test method	Flat woven or pressed felt products			Woven pile products
		Pass level			
		1 Suits, trousers	2 Coats, jackets, costumes, skirts, dresses, kimonos, dressing gowns, accessories	3 Shirts, blouses, nightwear	4 Garment shells
Dimensional change – relaxation	31				
Width		-3 < DC	-3 < DC	-3 < DC	-3 < DC
Length		-3 < DC	-3 < DC	-3 < DC	-3 < DC
No. and type of wash cycles		1 x 7A	1 x 7A	1 x 7A	1 x 7A
Dimensional change – felting	31				
Width		-	-	-	-
Length		-	-	-	-
Differential cuff edge shrinkage		-1 < DC < +1	-1 < DC < +1	-1 < DC < +1	-1 < DC < +1
No. and type of wash cycles	3 x 5A	3 x 5A	5 x 5A	3 x 5A	
Dimensional change – total	31				
Width		-3 < DC	-3 < DC	-3 < DC	-3 < DC
Length		-3 < DC	-3 < DC	-3 < DC	-3 < DC
Afterwash appearance	31				
Fabric smoothness (grade: minimum)				4	
Seam smoothness (grade: minimum)				4	
No. and type of wash cycles				1 x 7A	
Colourfastness to machine wash	193				
Change of colour (grade: minimum)				3–4	
Stain wool and nylon (grade: minimum)				4	
Stain other fibre (grade: minimum)				3–4	
Colourfastness to wet alkaline contact	174				
Change of colour (grade: minimum)				Multicoloured products only	
Stain wool and nylon (grade: minimum)				3–4	
Stain other fibre (grade: minimum)				4	
			3–4		

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

NOTES

1. Woolmark TM31: Dimensional stability

-3 < DC indicates that the shrinkage of the product in washing must not exceed 3%.
 -1 < DC < +1 indicates extension must not exceed 1% and shrinkage must not exceed 1%.
 For accessories (hats, shawls, etc.) only 1 x 7A plus 1 x 5A wash cycles are required.

After wash appearance

Assessment is to be carried out following ironing as described in Woolmark TWC-TM31. In addition to the fabric related appearance retention criteria, the product must not exhibit problems related to garment trim, which are likely to lead to consumer complaint (e.g. no colour bleeding from waist band trim, zip must function, button must not be loose, belt loops must not become detached or distorted, etc).

2. Woolmark TM193: Colourfastness to machine washing

The test method is divided into two parts:

Part A: standard detergent without perborate

Part B: standard detergent with perborate.

Both test methods are to be carried out and both sets of results must be reported.

If products fail Part B but pass Part A, additional labelling requirements must be observed to prevent problems that could arise during the washing of garments should a bleach containing detergent be used. In this case, all labels and tickets attached to garments **must** carry an advisory statement: 'Wash using a Woolmark approved detergent' (or similar). Full details of these additional requirements are available from The Woolmark Company.

Undyed and bleached white products must not be evaluated.

3. Woolmark TM174: Colourfastness to wet alkaline contact

Specification applies to multicoloured products only.

Products with a 'Machine wash and tumble dry' or 'Total Easy Care' care claim

Property	Test method	Flat woven or pressed felt products			Woven pile products
		Pass level			
		1 Suits, trousers	2 Coats, jackets costumes, skirts, dresses kimonos, dressing gowns, accessories	3 Shirts blouses, nightwear	4 Garment shells
Dimensional change – relaxation	31				
Width		-3 < DC	-3 < DC	-3 < DC	-3 < DC
Length		-3 < DC	-3 < DC	-3 < DC	-3 < DC
No. and type of wash cycles		1 x [7A + TD]	1 x [7A + TD]	1 x [7A + TD]	1 x [7A + TD]
Dimensional change – felting	31				
Width		-	-	-	-
Length		-	-	-	-
Differential cuff edge shrinkage		-1 < DC <+1	-1 < DC <+1	-1 < DC <+1	-1 < DC <+1
No. and type of wash cycles		5 x [5A + TD]	5 x [5A + TD]	5 x [5A + TD]	5 x [5A + TD]
Dimensional change – total	31				
Width		-3 < DC	-3 < DC	-3 < DC	-3 < DC
Length		-3 < DC	-3 < DC	-3 < DC	-3 < DC
Afterwash appearance	31				
Fabric smoothness (grade: minimum)				4	
Seam smoothness (grade: minimum)				4	
No. and type of wash/dry cycles			1 x [7A + TD]		
Colourfastness to machine washing	193				
Change of colour (grade: minimum)				3-4	
Stain wool and nylon (grade: minimum)				4	
Stain other fibre (grade: minimum)			3-4		
Colourfastness to wet alkaline contact	174				
Change of colour (grade: minimum)				3-4	
Stain wool and nylon (grade: minimum)				4	
Stain other fibre (grade: minimum)			3-4		

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

NOTES

1. Woolmark TM31: Dimensional stability

-3 < DC indicates that the shrinkage of the product in washing must not exceed 3%.

-1 < DC < +1 indicates extension must not exceed 1% and shrinkage must not exceed 1%.

For accessories (hats, shawls, scarves, gloves or ties) only 1 x [7A+TD] plus 1 x [5A+TD] wash cycles are required.

Afterwash and dry appearance

Assessment to be carried out following ironing. In addition to the fabric related appearance retention criteria, the product must not exhibit problems related to garment trim, which are likely to lead to consumer complaint (eg no colour bleeding from waist band trim, zip must function, button must not be loose, belt loops must not become detached or distorted, etc).

2. Woolmark TM193: Colourfastness to machine washing

The test method is divided into two parts:

Part A: standard detergent without perborate

Part B: standard detergent with perborate.

Both test methods are to be carried out and both sets of results must be reported.

Undyed and bleached white product must not be evaluated.

'Stain other fibre' is defined as the most severely stained fibre in the adjacent fabric.

If products fail Part B but pass Part A, additional labelling requirements must be observed to prevent problems that could arise during the washing of garments should a bleach containing detergent be used. In this case, all labels and tickets attached to garments **must** carry an advisory statement: 'Wash using a Woolmark approved detergent' (or similar). Full details of these additional requirements are available from The Woolmark Company.

3. Woolmark TM174: Colourfastness to wet alkaline contact

Applies only to multicoloured products.

Test and report criteria

The following are properties that **must be tested** on the samples provided but for which there is no pass or fail criteria

- abrasion resistance
- seam slippage
- pilling propensity

The licensee must test all samples to the appropriate method and report the result to his customer. The failure of the product to meet the guideline performance level must be highlighted by the Woolmark controller to the licensee.

When requested, The Woolmark Company can provide advice or assistance to the licensee to improve the performance of the product under normal commercial arrangements for consultancies.

The decision to accept or reject a particular fabric should be subject to agreement between the fabric manufacturer and their customer. The Woolmark Company **shall not** act to arbitrate between the two parties on such issues.

Property	Test method	Flat woven or pressed felt products			Woven pile products
		Guideline performance level			
		1 Suits, trousers	2 Coats, jackets costumes skirts,dresses, kimonos, dressing gowns, accessories	3 Shirts, blouses, nightwear	4 Garment shell
Abrasion (000 rubs: minimum)	112	20	10	15	10
Seam slippage (mm opening: maximum)	117	6	10	6	10
Pilling indication of propensity	196				

NOTES

1. Accessories

Test and report measurements do not have to be applied to accessories.

2. Woolmark TM112: Abrasion resistance

The abrasion resistance of fabrics is related to many factors (e.g. fibre fineness, yarn count, yarn type, weave) and it is difficult to correlate the abrasion conditions of a fabric during wear with test results because of the many facets of abrasion. An individual test can provide only a comparison with previous experience with a particular fabric rather than an exact prediction of the wear life of a fabric. However, fabrics must be tested according to Woolmark TWC-TM112 and it is advised that the guideline performance given in the preceding table be achieved.

3. Woolmark TM117: Seam slippage

It is recognised that seam slippage can be reduced by special seaming techniques. However, fabrics must be tested according to Woolmark TWC-TM117 and it is advised that the guideline performance given in the preceding table be achieved.

4. Woolmark TM196: Pilling propensity

Due to the many factors affecting pilling, there is no universally accepted test method that accurately predicts the likely propensity of a fabric to pill during use. However, fabrics must be tested according to Woolmark TWC-TM196.

COMMENTS

Pilling in wear is a highly variable process. The same fabric worn by different people under similar circumstances may pill quite differently. Further differences exist between consumers in their perception of what is unacceptable. The Woolmark Company pilling test is a simple method that indicates the propensity to pilling for most fabrics, although it may not always give a true

comparative indication of differences between fabrics because pilling is assessed after a fixed time interval. Pilling is a dynamic property, and the rate of pilling can often change according to time and wear. Some of the most important factors influencing pilling propensity are fibre diameter, fibre length, yarn twist level and fabric construction.

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THE WOOLMARK COMPANY

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