



THE WOOLMARK COMPANY

WOOLMARK SPECIFICATION

YARNS

SPECIFICATION SY-1

Effective 1 January 2016

SPECIFICATION SY-1: 2016

YARNS

PRODUCTS

Woolmark, Woolmark Blend and Wool Blend labelling may be applied to yarns for the following product categories:

- weaving (Apparel and Interior Textile products)
- machine knitting (Apparel and Interior Textile products)
- hand knitting.

Woolmark and Woolmark Blend labelling may be applied to bedding yarn.

Woolmark and Woolmark Blend labelling may be applied to yarns for the following product categories:

- wall-to-wall carpets (including tiles)
- rugs and squares.

SUB-BRAND QUALIFICATION

Requirements for specific sub-brand programs are given in the appropriate additional specification. Yarn sold as suitable for use in a particular sub-brand end product shall be accompanied by the following statement:

This yarn, when woven or knitted and finished following appropriate processes, is suitable for use in the manufacture of (include the relevant sub-brand description) garments.

SPECIFICATIONS

All requirements are mandatory

Specifications for Woolmark Blend and Wool Blend labelled yarns are the same as those for Woolmark, except where indicated.

A. APPAREL YARNS – WEAVING AND KNITTING INCLUDING HAND KNITTING

Property	Test method	Pass level
Wool content (%: minimum)	155	Woolmark Pure New Wool Woolmark Blend 50% new wool Wool Blend 30% new wool
Non-wool fibre content (%: maximum)	155	Woolmark Blend 50% Wool Blend 70%
Colourfastness to rubbing – dry stain (grade: minimum)	165	3–4
Colourfastness to light blue reference (grade: minimum)	5	Greater than 1/12 standard depth: 4
		Less than, or equal to, 1/12 standard depth: 3
		<i>Bright and pastel colours</i>
		Darker than 1/12 standard depth: 3
		Lighter than, or equal to, 1/12 standard depth: 2–3

NOTES

1. Woolmark TM155: Wool Content

Woolmark labelling see Specification F-1, F-2, F-3 or F-4, as appropriate.

Woolmark Blend labelling see Specification F-5

Wool Blend labelling see Specification F-7

Decorative fibre

A percentage of non-wool fibre may be included in Woolmark and Woolmark Blend labelled yarn for purely decorative effect.

2. Woolmark TM5: Colourfastness to light

Only applicable to dyed yarn. Undyed and bleached white yarn shall not be evaluated.

For products sold in Australia and South Africa, 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.

Bright and pastel colours

Only the shades given on The Woolmark Company shade reference card, bright and pastel colours and intermediate shades at maximum brightness are included. No other shades shall be classed as bright or pastel without prior reference to the Woolmark Management Group.

3. Woolmark TM165: Colourfastness to rubbing

Only applicable to dyed yarn greater than 1/12 standard depth. If the depth of shade is in doubt, the test must be conducted.

4. Woollen spun yarns

All woollen spun yarns shall be scoured before testing to remove processing oils. All yarns with an extractable matter content of 2% and higher (as tested by IWTO-10) shall be scoured before testing to remove processing oils.

Scouring is carried out as follows: (1) prepare a soap solution of 1g/L with soap flakes and deionised or distilled water; (2) place a hank of yarn in the solution and gently squeeze for 2–3 minutes; (3) rinse the yarn under cold running tap water for 5 minutes; (4) hydro-extract the excess water and dry the yarn flat in an oven not exceeding 60°C for 1 hour or at room temperature overnight.

Yarns with a 'Dry clean' care claim

Property	Test method	Pass level
Colourfastness to water	6	
change colour (grade: minimum)		3-4
stain wool (grade: minimum)		3
stain cotton (grade: minimum)		3
stain other fibre (grade: minimum)		3 (for blend only)

NOTES

1. 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

2. Woolmark TM6: Colourfastness to water

Only applicable to dyed yarn. Undyed and bleached white yarn shall not be evaluated.

3. Woollen Spun Yarns

All woollen spun yarns shall be scoured before testing to remove processing oils. All yarns with an extractable matter content of 2% and higher (as tested by IWTO-10) shall be scoured before testing to remove processing oils.

Scouring is carried out as follows: (1) prepare a soap solution of 1g/L with soap flakes and deionised or distilled water; (2) place a hank of yarn in the solution and gently squeeze for 2-3 minutes; (3) rinse the yarn under cold running tap water for 5 minutes; (4) hydro-extract the excess water and dry the yarn flat in an oven not exceeding 60°C for 1 hour or at room temperature overnight.

Yarns with a 'Hand wash' care claim

Property	Test method	Pass level
Colourfastness to hand wash	250	
change of colour (grade: minimum)		3-4
stain wool (grade: minimum)		4
stain other fibre (grade: minimum)		3-4 (for blend only)
Colourfastness to wet alkaline contact	174	
change of colour (grade: minimum)		3-4
stain wool (grade: minimum)		4
stain other fibre (grade: minimum)		3-4 (for blend only)

NOTES

1. Woolmark TM250: Colourfastness to hand washing

Only applicable to dyed yarn. Undyed and bleached white yarn shall not be evaluated.

2. Woolmark TM174: Colourfastness to wet alkaline contact

Only applicable to dyed yarn. Undyed and bleached white yarn shall not be evaluated.

3. Woollen spun yarns

All woollen spun yarns shall be scoured before testing to remove processing oils. All yarns with an extractable matter content of 2% and higher (as tested by IWTO-10) shall be scoured before testing to remove processing oils.

Scouring is carried out as follows: (1) prepare a soap solution of 1g/L with soap flakes and deionised or distilled water; (2) place a hank of yarn in the solution and gently squeeze for 2-3 minutes; (3) rinse the yarn under cold running tap water for 5 minutes; (4) hydro-extract the excess water and dry the yarn flat in an oven not exceeding 60°C for 1 hour or at room temperature overnight.

Property	Test method	Pass level				
		Hand and machine knitting yarn			Weaving yarns	
		Sweaters, cardigans, waistcoats, accessories	Socks, stockings, tights, underwear, shirts, blouses, nightwear,	Trousers, leggings, skirts, dresses, jackets, coats, dressing gowns	All products, except shirts, blouses, nightwear	Shirts, blouses, nightwear
Dimensional change – felting (%)	31					
width		DC < +5	DC < +5	DC < +5	DC < +5	DC < +5
length		-5 < DC	-5 < DC	-5 < DC	-5 < DC	-5 < DC
area		-8 < DC	-8 < DC	-8 < DC	-8 < DC	-8 < DC
No. and type of wash cycles		1 × 7A	1 × 7A	1 × 7A	1 × 7A	1 × 7A

NOTES

1. Woolmark TM31

The felting cycle shall be preceded by a 1 × 7A relaxation cycle (see TM31):

-5 < DC indicates that the shrinkage must be less than 5%

DC < 5 indicates that the extension in washing must be less than 5%

Dimensional change felting is calculated on the relaxed dimensions as shown in TM31.

Yarns with a 'Machine wash' care claim

Property	Test method	Pass level
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 (grade: minimum)		4
stain other fibre (grade: minimum)		3-4

NOTES

1. Woolmark TM193: Colourfastness to machine washing

Only applicable to dyed yarn. Undyed and bleached white yarn **shall not** be evaluated.

2. Woolmark TM174: Colourfastness to wet alkaline contact

Only applicable to dyed yarn. Undyed and bleached white yarn **shall not** be evaluated.

3. Woollen spun yarns

All woollen spun yarns shall be scoured before testing to remove processing oils. All yarns with an extractable matter content of 2% and higher (as tested by IWTO-10) shall be scoured before testing to remove processing oils.

Scouring is carried out as follows: (1) prepare a soap solution of 1g/L with soap flakes and deionised or distilled water; (2) place a hank of yarn in the solution and gently squeeze for 2-3 minutes; (3) rinse the yarn under cold running tap water for 5 minutes; (4) hydro-extract the excess water and dry the yarn flat in an oven not exceeding 60°C for 1 hour or at room temperature overnight.

Property	Test method	Pass level				
		Hand and machine knitting yarn			Weaving yarns	
		Sweaters, cardigans, waistcoats, accessories	Socks, stockings, tights, underwear, shirts, blouses, nightwear	Trousers, leggings, skirts, dresses, jackets, coats, dressing gowns	All products, except shirts, blouses, nightwear	Shirts, blouses, nightwear
Dimension change – relaxation (%)	31					
width		–	–	–	–	–
length		–	–	–	–	–
No. and type of wash cycles		1 × 7A	1 × 7A	1 × 7A	1 × 7A	1 × 7A
Dimensional change – felting (%)						
width		DC < +5	DC < +5	DC +5	DC < +5	DC < +5
length		–5 < DC	–5 < DC	–5 < DC	–5 < DC	–5 < DC
area	–8 < DC	–8 < DC	–8 < DC	–8 < DC	–8 < DC	
No. and type of wash cycles		2 × 5A	5 × 5A	3 × 5A	3 × 5A	5 × 5A

NOTES

1. Machine washability shall not be claimed for Woolmark yarn unless the wool has undergone a shrink-resist treatment.

2. Woolmark TM31: Dimensional Stability

–5 < DC indicates that the shrinkage must be less than 5%.

DC < 5 indicates that the extension in washing must be less than 5%.

3. Assessment

All yarns with a machine wash care claim shall be knitted up and finished as specified in Woolmark TWC-TM31 before assessment of care claim. The measurements shall be based on the relaxed specimen (i.e. following 1 x 7A cycle).

LABELLING OF MACHINE-WASHABLE HAND KNITTING YARN

Instructions on label or ball band

The following note (or similar) shall be included on the label or ball band:

'It is strongly recommended that a test panel (about 10cm² in a stocking stitch) be knitted and washed to check the tension before commencing knitting of the actual garment.'

The appropriate needle size for a yarn shall be recommended.

Drying instructions shall be as given below (or similar):

'Avoid line drying. Garments should be eased gently into shape and laid flat for drying.'

Shade cards

The following statement shall be included on shade cards, delivery notes and other relevant items:

'This yarn, when knitted and finished following appropriate processes, is suitable for use in garments that will meet the Woolmark, Woolmark Blend and Wool Blend specifications for machine-wash knitwear.'

Yarn with a 'Machine wash and tumble dry' care claim

Property	Test method	Pass level
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

NOTES

1. Woolmark TM193: Colourfastness to machine washing

Only applicable to dyed yarn. Undyed and bleached white yarn shall not be evaluated.

2. Woolmark TM174: Colourfastness to wet alkaline contact

Only applicable to dyed yarn. Undyed and bleached white yarn shall not be evaluated.

Woollen Spun Yarns

All woollen spun yarns shall be scoured before testing to remove processing oils. All yarns with an extractable matter content of 2% and higher (as tested by IWTO-10) shall be scoured before testing to remove processing oils.

Scouring is carried out as follows: (1) prepare a soap solution of 1g/L with soap flakes and deionised or distilled water; (2) place a hank of yarn in the solution and gently squeeze for 2-3 minutes; (3) rinse the yarn under cold running tap water for 5 minutes; (4) hydro extract the excess water and dry the yarn flat in an oven not exceeding 60°C for 1 hour or at room temperature overnight.

Property	Test method	Pass level				
		Hand and machine knitting yarn			Weaving yarns	
		Sweaters, cardigans, waistcoats, accessories	Socks, stockings, tights, underwear, shirts, blouses, nightwear	Trousers, leggings, skirts, dresses, jackets, coats, dressing gowns	All products, except shirts, blouses and nightwear	Shirts, blouses, nightwear
Dimensional change – relaxation (%) width length	31	- -	- -	- -	- -	- -
No. and type of wash cycles		1 × [7A+TD]	1 × [7A+TD]	1 × [7A+TD]	1 × [7A+TD]	1 × [7A+TD]
Dimensional change – felting (%) width)		DC < +5	DC < +5	DC < +5	DC < +5	DC < +5
length		-5 < DC	-5 < DC	-5 < DC	-5 < DC	-5 < DC
area		-8 < DC	-8 < DC	-8 < DC	-8 < DC	-8 < DC
No. and type of wash cycles		5 × [5A+TD]	5 × [5A+TD]	5 × [5A+TD]	5 × [5A+TD]	5 × [5A+TD]

NOTES

1. Woolmark TM31: Dimensional stability

'Machine wash and tumble dry' shall not be claimed for Woolmark yarn unless the wool has undergone a shrink-resist treatment.

-5 < DC indicates that the shrinkage must be less than 5%.

DC < 5 indicates that the extension in washing must be less than 5%.

2. Assessment

All yarns with a 'Machine wash and tumble dry' care claim shall be knitted up and finished as specified in Woolmark TWC-TM31 before assessment of care claim. The measurements shall be based on the relaxed specimens (ie after 1×7A cycle plus 1 × tumble dry cycle).

LABELLING OF MACHINE WASH & TUMBLE DRY HAND KNITTING YARN

The following note (or similar) shall be included on the label or ball band:

'It is strongly recommended that a test panel (about 10cm² in a stocking stitch) be knitted, washed and tumble dried to check the tension before commencing knitting of the actual garment.'

The appropriate needle size for a yarn shall be recommended.

Machine washing and drying instructions shall be given as below or similar:

'Machine wash at 40°C max and use the 'cool' or 'cold' setting on a tumble drier. Do not tumble dry using the hot setting.'

Shade cards

The following statement shall be included on shade cards, delivery notes and other relevant items:

'This yarn, when knitted and finished following appropriate processes, is suitable for use in garments that will meet the Woolmark and Woolmark Blend specifications for machine-wash and tumble-dry knitwear.'

Yarns are accepted on the basis of dimensional change only.

B. FURNISHING AND BEDDING YARN

Property	Test method	Pass level
Wool content (%)	155	Woolmark: 100% Pure New Wool Woolmark Blend: 50%
Non-wool fibre content (%)		Woolmark Blend: 50%
Colourfastness to rubbing wet and dry stain(grade: minimum)	165	3-4
Colourfastness to light blue reference (grade: minimum)	5	Greater than 1/12 standard depth: 5 Less than (or equal to) 1/12 standard depth: 4
		<i>Bright and pastel colours</i> Darker than 1/12 standard depth: 3 Lighter than, or equal to, 1/12 standard depth: 2-3
Colourfastness to shampooing (grade: minimum)	233	3-4

NOTES

1. Woolmark TM155: Wool Content

Woolmark labelling see Specification F-1, F-2, F-3 or F-4, as appropriate.
Woolmark Blend labelling see Specification F-5.

Decorative fibre

A percentage of non-wool fibre may be included in Woolmark and Woolmark Blend labelled yarn for purely decorative effect.

2. Woolmark TM5: Colourfastness to light

Only applicable to dyed yarn. Undyed and bleached white yarn shall not be evaluated.
For products sold in Australia and South Africa, 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.

Bright and pastel colours

Only the shades given on The Woolmark Company shade reference card, bright and pastel colours and intermediate shades at maximum brightness are included. No other shades shall be classed as bright or pastel without prior reference to Woolmark Management Group.

3. Woolmark TM165: Colourfastness to rubbing

Only applicable to yarn dyed darker than 1/12 standard depth.

4. Woolmark TM233: Colourfastness to shampooing

Only applicable to yarn dyed darker than 1/12 standard depth.

5. Insect resistance: Woolmark TWC-TM27 and Woolmark TWC-TM28

See Specification CP-4. Only applicable in Australia, New Zealand and South Africa.

6. Woollen Spun Yarns

All woollen spun yarns shall be scoured before testing to remove processing oils. All yarns with an extractable matter content of 2% and higher (as tested by IWTO-10) shall be scoured before testing to remove processing oils.

Scouring is carried out as follows: (1) prepare a soap solution of 1g/L with soap flakes and deionised or distilled water; (2) place a hank of yarn in the solution and gently squeeze for 2-3 minutes; (3) rinse the yarn under cold running tap water for 5 minutes; (4) hydro-extract the excess water and dry the yarn flat in an oven not exceeding 60°C for 1 hour or at room temperature overnight.

C. CARPET AND RUG OR SQUARE YARN

Property	Test method	Pass level
Wool content (%: minimum)	155	Woolmark: Pure New Wool Woolmark Blend: 50% new wool
Non-wool content: (%: maximum) Polyamide Bi-component polyester Polypropylene Other natural fibres		Woolmark Blend: 50% new fibre (maximum)
Colourfastness to shampooing	233	
change of colour (grade: minimum)		4
stain wool (grade: minimum)		3-4
stain polyamide (grade: minimum)		3-4 (for blend product only)
stain polyester (grade: minimum)		3-4 (only if polyester in blend)
stain polypropylene (grade: minimum)	3-4 (only if polypropylene in blend)	
DCM or methanol extractable matter (%: maximum)	136	1.0 Blend with Polyester or Polypropylene: 1.2
Abrasion weight loss: (mg/1000 rubs: maximum)	283	Woolmark: 70 Woolmark Blend: 45
Colourfastness to light (grade: minimum)	133	Standard depth: 5 Less than 1/12 standard depth: 4 First fade : 3

NOTES

1. Woolmark TM155: Wool content

Woolmark labelling see Specification F-1, F-2, F-3 or F-4, as appropriate.

Woolmark Blend labelling see Specification F-5

Decorative fibre

A percentage of non-wool fibre may be included in Woolmark and Woolmark Blend labelled yarn for purely decorative effect.

Other fibres:

Products that meet the above requirement but contain new non-wool fibres other than those specified may be submitted to the Woolmark Management Group for tribunal consideration.

Polyester:

Only low melt sheath bi-component polyester is permitted. Fibres shall be intimately blended with wool.

2. Woolmark TM233: Colourfastness to shampooing

Only applicable to yarn dyed darker than 1/12 standard depth.

3. Use of 'New'

For products containing polyamide and polyester fibre in intimate blend with wool, the word 'new' shall not be used in the fibre content phrase if the product is offered for sale in any European Union (EU) member state.

4. Woolmark TM136: Solvent (DCM) extraction

Woolmark Blend products may give higher results than pure wool. For blends containing polypropylene, methanol must be used as extraction solvent. In this case, the maximum is 1.2%.

5. Insect resistance: Woolmark TWC-TM27 and Woolmark TWC-TM28

See Specification CP-4. Only applicable to Australia, New Zealand and South Africa.

6. Woollen spun yarns

All woollen spun yarns shall be scoured before testing to remove processing oils. All yarns with an extractable matter content of 2% and higher (as tested by IWTO-10) shall be scoured before testing

to remove processing oils.

Scouring is carried out as follows: (1) prepare a soap solution of 1g/L with soap flakes and deionised or distilled water; (2) place a hank of yarn in the solution and gently squeeze for 2–3 minutes; (3) rinse the yarn under cold running tap water for 5 minutes; (4) hydro-extract the excess water and dry the yarn flat in an oven not exceeding 60°C for 1 hour or at room temperature overnight.

ADDITIONAL CLAIM: Insect resistance—Woolmark TWC-TM27 and Woolmark TWC-TM28

Property	Test method	Pass level
Insect resistance	27, 28	See Specification CP-4

If a Woolmark or Woolmark Blend carpet yarn carries an insect resist (or similar) claim, it must meet the requirements in CP-4 applicable to the country of sale.

TEST AND REPORT CRITERIA FOR CARPET, RUG AND SQUARE YARNS

All samples must be tested using the test methods in the following table, however there is no pass or fail criteria for the properties tested. The licensee must test all samples to the appropriate method and report the result to the customer.

The failure of the product to meet the guideline performance level must be highlighted in the report 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 the customer. The Woolmark Company **shall not** act to arbitrate between the two parties on such issues.

Property	Test method	Guideline level
Colourfastness to rubbing (Grade: minimum)	232	Wet: 3 Dry: 3-4
Colourfastness to water (grade: minimum)	6	Change in colour: 4
Cold water staining (grade: minimum) Undyed and berber products only	256	3-4
DCM extractable matter (%: maximum) See Note 4	136	1

NOTES

1. Woolmark TM232: Colourfastness to rubbing

This test is not required on undyed yarns.

2. Woolmark TM6: Colourfastness to water

This test is not required on undyed yarns.

3. Woolmark TM256: Cold water staining

This test applies to yarns to be used undyed or in berber products.

4. Woolmark TM136: DCM extractable matter

Woolmark Blend products may give higher results. See guidelines in Appendix 1 of Woolmark TWC-TM136.

For shades lighter than, or equal to, 1/12 standard depth, the maximum extractable matter content is 1.0%.

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