Be inspired by

Merino Wool®

THE CAMPAIGN FOR WOOL
PATRON: HRH THE PRINCE OF WALES

THE WOOLMARK COMPANY
SUPPORTS THE CAMPAIGN FOR WOOL

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1. What is wool?

Wool is a natural fibre, usually from sheep, and is composed of protein material called keratin.
The hair of many other animals such as goats and camels is chemically similar.
Wool has been used for clothing since the end of the Stone Age; it can also be used to produce carpets, interior textiles like bedding and upholstery, insulation, and in some parts of the world housing.

Where does wool come from?

The finest qualities of wool are obtained from sheep reared primarily for their wool. Sheep breeds have evolved from a combination of genetic and environmental factors. The soil and climate of a country largely determine the type of sheep and quality of wool which can be produced.
Sheep are farmed in most countries of the world but the main producers of wool for export are in the southern hemisphere. The biggest wool exporter is Australia.
Australia is the major producer of Merino wool and is home to around 70 million sheep. Approximately 70 percent of all Australian sheep shorn are purebred Merino with most of the remainder having at least part Merino blood (source: AWI/MLA survey conducted in October 2010).

How does wool grow?

Wool fibres grow in tufts (called staples) on the sheep's back. The fibres grow in a distinct wave pattern, referred to as the crimp; the finer the wool, the more obvious the crimp.

- Wool fibres grow around 0.2mm/day
- A fine wool fleece may contain over 100 million fibres
- Sheep have about 10,000 follicles/cm^2 of skin
- Sweat glands associated with the follicle are part of the natural cooling system of the sheep

As the wool grows in the follicle it is covered with natural grease and perspiration which have to be removed by washing the shorn wool (scouring) before further processing can be carried out. The natural grease can be recovered and lanolin can be extracted which is used in many cosmetics, creams and soaps.

Types of wool

Wools from different breeds of sheep vary in colour, length and diameter even within a single fleece.
It is possible though to divide wool into three broad categories.

Fine

The finest diameter wool comes from Merino sheep. It is used for high quality, smooth, soft handling apparel fabrics and knitting yarns and is highly valued by the world's leading fashion designers. Australian Merino flocks now produce the world's finest apparel wools. Australia supplies 60% of the world's traded apparel wool.

Medium

A wide range of wools between fine and coarse is produced by crossing one breed of sheep with another. Many of these crosses have become established breeds, an example is the Corriedale which is bred in large numbers. It originated from a Merino ram and a British long wool ewe. Medium wools are used in a wide variety of woven apparel cloths, knitting yarns and furnishings.

Coarse

Many different sheep breeds produce coarser wools and often they are dual purpose breeds farmed for both meat and wool. An example is the Romney breed which produces a long, medium lustre wool which is particularly useful for carpets because of its strength and durability. New Zealand is the biggest exporter of carpet wool.

Other luxury fibres

Camel

Comes mainly from the double humped Bactrian camel of Northern China and southern Outer Mongolia.
Fibre from the mane along the neck region is collected when a camel moults.
Valuable fine underhair is 18-21 microns and length: 25-125mm.
Comes in several colours principally reddish brown to grey.

Alpaca

Main fibre of the South American camel family.
Fibre is soft and silky from 20-34 microns and 80-120mm long. 80% comes from Peru, there are two types:
Huayaca (80%), Suri (20%) – sought after for their long crimped fibre.
Comes in colours from white to black with fawns, browns and cooler greys.

Vicuna

Smaller cousin of the Alpaca and were classified as endangered in 1965.
In1987 permission was given to harvest the very valuable fleece. A Vicuna fleece weighs approximately 220g but it has to be dehaired and after washing only a few grams are left for processing.
Diameter: 13 -14 microns Length: 35 -75mm
Total output per year will produce around 2000m^2 of cloth.

Cashmere

60% comes from China (others are Outer Mongolia, Iran, Afghanistan). Fine soft and silky under hair, 14 -16 microns and 25-80mm long. Several colours with white being the most prized and expensive.
A goat yields between 1 and 1.5 kg of fleece, only about 500g is underhair.
Underhair from 20 goats makes an overcoat, from 2 goats makes a sweater.

Mohair

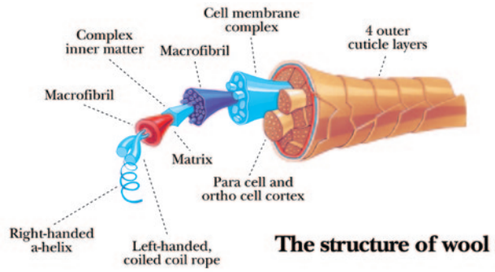
Lustrous fibre from the Angora Goat. South Africa and USA are the main producers, followed by Turkey and Argentina. Kid mohair (<6m old) is most valuable at around 24 micron.(100 -150mm).

Angora

Fibre is combed from the Angora rabbit.
Angora is the lightest natural fibre known, due to the hollow nature of many of its fibres.
Fibre diameter typically around 13 microns.

2. Why is wool so clever?

Wool fibres are made up of a very complex and sophisticated series of components, each responsible for providing wool with unique and natural benefits.



The structure of wool fibre

The outer sheath or cuticle (10%) of the fibre consists of a layered structure which forms the surface scales. These scales are important for protection and providing a durable waterproof surface. When wool is agitated and submerged in warm water the scales can become tangled which is what causes wool to felt. Felting can be controlled and used to create innovative textures and effects.

3. Why choose wool?

Wools inherent benefits

Wools clever structure means that it has many natural beneficial qualities that make it a unique and versatile fibre. Wool is...

Natural

- Sheep have evolved to produce a fibre that has become one of the most effective natural forms of all-weather protection known to man

A renewable fibre

- Every year sheep produce a new fleece
- Woolgrowers actively work to improve efficiency and care for natural resources, endeavouring to make the wool industry sustainable for future generations

Biodegradable

- When wool fibre is disposed of it takes only a few years to decompose

Natural Insulator

- Wool insulates the home and people, providing and retaining warmth. Wool prevents the loss of energy and reduces carbon emissions

Breathable

- Wool has a natural structure which allows it to absorb and release humidity in the atmosphere or perspiration from the wearer. It is able to acclimatise to individual environments – ensuring that the wearer is not too hot or too cold. Wool has a large capacity to absorb moisture vapour (up to 35% of its own weight) and reduce sweat next to the skin

IF WE COULD SPIN A SINGLE FLEECE INTO A TYPICAL PLYED YARN

e.g. a 2/24's there would be around 70 kms of yarn produced

Durable

- A wool fibre can be bent 20,000 times without breaking, and has the power to recover – this is why wool products last for years

Appearance Retention

- The benefits of durability and appearance retention reduce the need to frequently replace and renew thereby reducing landfill and CO_2 emissions

Elastic

- The natural elasticity of the Merino fibre means it stretches with the wearer, but then returns to its natural shape, so there is less chance of garments sagging or losing their shape. Untreated wool is second only to polyester in its ability to recover from wrinkles under normal (dry) conditions.

A Safe Solution

- Wool is naturally flame retardant due to its high water and nitrogen content, it has a higher ignition threshold than many other fibres and will produce less toxic and noxious fumes that cause death in fire situations

Protection from the sun

- Wool fabrics have a good UPF rating for both dry and wet situations and will protect against the sun's harmful rays

THE versatility of Merino wool - fashion meets performance

Australian Merino wool caters to all lifestyles and is the fibre of choice for endurance athletes, business travellers, and the world's top fashion designers.

Active and performance wear

- Australian Merino wool is the natural solution for sport and performance wear. Delivering ultimate comfort and durability, Merino wool active wear performs when you do. From cycling jerseys and mountaineering fleeces to wetsuit linings, tennis and golf wear, Merino wool naturally performs
- With natural breathability, UV protection, odour reduction and moisture control, the smooth, lightweight characteristics of Merino wool mean you don't have to sacrifice luxury for performance

Business wear and travel

- On-the-go business professionals are sure to leave the right impression with business attire that provides moisture control, resists odours and won't shrink or fade after repeated cleaning.
- Creases bounce back providing as new appearance, and garments remain crisp even after long wear and laundering, leaving the wearer looking and feeling fresh

Fashion

- Today's designers continue to be inspired by the lavish qualities of the dynamic Merino fibre, taking Merino wool into the future with new technology and innovative finishes
- Merino wool is finer, softer and lighter than other wools. With superior drape and natural elasticity, Merino wool garments effortlessly follow the body's form, making it a favourite with designers across the globe
- Merino wool can be woven into superior quality fabrics and made up into, elegant garments and soft knitwear

4. Easy care and wear

Caring for your Merino wool

Always ensure you read the label for specific care instructions, as they may vary. A few simple measures after each wear will ensure your Australian Merino wool garments remain in great condition.
Where possible it is recommended to turn the garment inside out for laundering and to avoid bleaches and biological detergents, unless they are Woolmark approved.
Like colours should be laundered together. There are generally four laundering options (depending on the care claim in the label):

1.
Dry clean only - your Australian Merino wool garment should be taken to a reputable dry cleaner to ensure that the superior quality of this garment is well looked after.

2.
Hand wash - luke warm hand wash at approx 30°C, using a gentle Woolmark approved detergent and rinse well. Dry knitwear flat and line dry wovens.

3. Machine washable - ideally wash on a wool or Woolmark cycle - if this is not available then put on a maximum of 40°C gentle action wash.

4. Total easy care - follow machine washable instructions, your Australian Merino wool garment can then be tumble dried on a low setting or delicate cycle.

Wool is 50% carbon by weight

Some good tips to remember...

- ***Hang wovens, fold knits***
  Woven Australian Merino garments should be hung on shaped or padded coat hangers. Knitted garments should be gently folded and stored in drawers
- ***Refreshing***
  Australian Merino garments can be refreshed after unpacking or wearing by hanging them in a steamy bathroom. Moisture from the steam will remove wrinkles
- ***Dry away from direct heat***
  If Australian Merino gets wet, dry the garment at room temperature, away from direct heat or sunlight
- ***Ironing***
  Many Australian Merino garments do not require ironing, but very smooth fabrics may look better if pressed. Always use steam when pressing Merino. Set your iron on the wool setting and avoid ironing the fabric when it's totally dry
- ***Long-term storage***
  Since food stains and body oils attract moths, you should ensure your Australian Merino garment is clean before packing it away in airtight bags or containers. Ideally use a Woolmark approved moth repellent but do not place directly on the garment
- ***Machine Washability***
  Merino wool is available in several degrees of Easy Care – from dry-clean-only to machine wash tumble dry – depending on the consumer preference. Merino wool can be made suitable for machine wash and tumble dry easy care by treating the fibre to prevent felting shrinkage; the irreversible shrinkage that occurs when wool is agitated in water. Felting shrinkage is associated with the microscopic scales on the fibre surface which interact with each other in a ratchet like mechanism, progressively forcing the garment to contract. The special anti-felting treatments can be applied at the fibre or fabric stage and work by obscuring the scales with a fine coating which prevents them from interacting with each other. The treated fibre still possesses all the inherent benefits of merino wool and can be safely machine washed. Many retailers stock Easy Care Wool that is machine washable at 40 degrees, it is always important to read the care label though to make sure
- ***Appearance Retention***
  Pilling is something we have all experienced and can make our clothes look worn before their time. Pilling can occur in all fibres and is caused by abrasion on the fabric surface. Friction causes any loose fibres on the surface of a fabric to start becoming entangled with one another until little balls of fluffy fibres have formed which are known as pills. Garments made from natural fibres like wool tend to shed pills during washing and any noticeable pills can easily be removed by hand

There are normally around 5 - 7,000 kms of fibre in each adult Merino fleece (e.g. 20 um, 5 kg greasy)

5. From fleece to fashion

Wool processing - the pipeline

Wool growing and shearing - Merino sheep continually produce wool and need to be shorn once or twice year. Once they have been shorn their beautiful wool is collected and used to create many different products but mainly apparel as it is luxurious and soft next to the skin

Scouring - Fleeces are washed to remove dirt, dust, sweat and wool grease. The wool grease is recovered and from this lanolin is extracted which is used widely in cosmetics and skin care products.

Topmaking - When the wool comes out of the scour the fibres are in a randomised formation. In order to spin the fibres they must be straightened and laid relatively parallel to each other. The processes of carding, combing and gilling are used to arrange the fibres in an organised fashion; they are also used to remove remaining vegetable matter and short fibres. The processes conducted between cleaning the wool at the scour and spinning are collectively known as topmaking. Topmakers produces slivers of wool in packages called tops.

Spinning - Spinning is the process of inserting twist into assemblies of fibres to create yarn. There are three types of yarn in the wool industry. Woollen yarns are bulky and contain more short fibres and tend to be used for jumpers and blankets. Worsted yarns use longer fibres to produce smoother yarns which are used in products like suits. Semi-worsted yarns are uncombed and ''half way between'' woollen and worsted spinning. They are used as an alternative to woollen spun yarns in knitwear or upholstery.

Weaving - This is the process of interlacing yarns usually at right angles to each other.

Knitting - This is the process of interlooping yarns across the width of the fabric or the length.

Making up - Individual panels of garments are cut from flat fabric and sewn together to form a garment. Knitwear panels can also be shaped on the knitting machine, therefore, don't need cutting. Such knitted panels are normally 'linked' together instead of traditionally sewn to make fully fashioned garments.

Fabric finishing - Woven fabrics and circular knitted fabrics go through many different processes following fabric formation to make them suitable for end use. Many fabrics are almost completely unrecognisable between the finished fabric and the fabric that comes off the weaving loom or knitting machine. Processes are carried out to wash, flatten, reduce hairiness, increase hairiness, stretch, consolidate and stabilise fabrics for end use. These processes will improve the appearance, handle and performance of the fabrics.

Dyeing - Dyeing is the process of colouring the wool. This can be done as loose fibre, yarn, fabrics or garments. Colouration effects may also be introduced through printing.

Ready for sale - After pressing, the garments are ticketed and labelled to confirm fabric composition and to let consumers know how to care for their Merino wool garment.

Look for the Woolmark

The Woolmark brand is the world's best known textile fibre brand. The value of the brand is well established the world over in the apparel, interior textiles and home laundry sectors. The Woolmark brand provides consumers with guaranteed fibre content and an assurance of quality.

The brand is owned by Australian Wool Innovation Limited (AWI), the world's leading wool textile organisation. The company operates a global licensing program to ensure that any product bearing the Woolmark logo meets strict wool quality and performance criteria based on the exacting demands of today's customer.

The Woolmark was created in 1964 by Francesco Saroglia and the design is intended to represent the softness, elegance and modernity of wool. An inspiration for consumer confidence, the Woolmark brand is a promise of quality.

One Merino sheep produces enough wool to make 18 jumpers

Woolmark design & fashion industry support

Woolmark does not merely connect the apparel industry with a luxurious, superior-performing fibre; Woolmark also provides industry support to ensure Australian Merino is a resounding commercial success.
Creating demand for Australian Merino is one of the cornerstones of Woolmark's strategy. Practically, this involves educating trade channels on the outstanding natural, biodegradable and renewable properties of wool.

It also involves providing retail partners and licensees with the use of pre-eminent brands, Merino Perform™ and the Woolmark®. Additionally, partners may also benefit from tailored product marketing strategies, fashion and colour trend forecasting services, innovative point-of-sale materials, and branded ticketing and merchandise support. Such resources promote strong communications, aid customer understanding of Merino wool and easy care products, and maximise the appeal of wool.

Key worsted/woollen yarn and fabric manufacturers in the UK

Spinners:

Gledhills
Pingle Mill
Pingle Lane
Delph
Saddleworth OL3 5EX

Company Details:
Spinner of woollen yarns.

Tel: +44 (0)1457 874651
Website: www.rgledhill.co.uk

Knoll Yarns Ltd.
(formerly S.C. Yarns)
1 Wells Road
Ilkley
West Yorkshire LS29 9JB

Company Details:
Merchants of woollen yarns for weaving and knitting.

Tel: +44 (0)1943 602516
Email: info@knollyarns.com
Website: www.knollyarns.com

Laxtons Specialist Yarns
Gordon Mills
Netherfield Road
Guiseley LS20 9PD

Company Details:
Manufacturers of worsted spun and fancy yarns using wool for hand and machine knit, woven apparel and upholstery products.

Tel: +44 (0)1943 877123
Email: sales@laxtons.com
Website: www.laxtons.com

Spectrum Yarns
Spa Mills
New St, Slaithwaite
Huddersfield
West Yorkshire HD7 5BB

Company Details:
Apparel yarn spinner consisting of worsted ring spinning and mohair loop spinning in a variety of natural fibres and counts. Hand knitting yarns under 'Stylecraft' name.

Tel: +44 (0)1484 843732

Z Hinchliffe
Hartcliffe Mills
Denby Dale
Huddersfield HD8 8QL UK

Company Details:
Spinners of woollen yarn for weaving and knitting.

Tel: +44 (0)1484 862207
Email: office@zhinchliffe.co.uk
Website: www.zhinchliffe.co.uk

Weavers:

Abraham Moon & Sons Ltd.
Netherfield Mills
Guiseley
Leeds LS20 9PA

Company Details:
Manufacturer of woven fabric for apparel, furnishings and accessories.

Tel: +44 (0)1943 873181
Email: fabric.sales@moons.co.uk
Website: www.moons.co.uk

Alfred Brown
Empire Mills
Bramley, Leeds
LS13 3HG

Company Details:
Alfred Brown are weavers of fine quality worsted cloth in Leeds, West Yorkshire. They are one of the few remaining Yorkshire Mills with bulk production.

Tel: +44 (0)113 256 0666
Email: sales@alfredbrown.co.uk
Website: www.alfredbrown.co.uk

Bulmer and Lumb Group
Buttershaw, Bradford
West Yorkshire BD6 2NE

Company Details:
A vertical mill that has capabilities to spin, dye and weave. The following fabric manufacturers come under the Bulmer and Lumb Group: Taylor and Lodge, Arthur Harrison, Edwin Woodhouse and Bulmer and Lumb Fabrics.

Tel: +44 (0)1274 676321

Dormeuil
35 Sackville Street, Savile Row,
Westminster, London W1S 3EG

Company Details:
Suppliers of fine worsted cloth woven in Yorkshire

Tel: +44 20 7439 3723
Website: www.dormeuil.com/

Hield Brothers
Brigella Mills
Little Horton Lane
Bradford BD5 0QA

Company Details:
Manufacturer of woven material for apparel and furnishings.

Tel: +44 (0)1274 525525
Website: www.hield.com

Holland and Sherry
PO Box 1, Venlaw Road
Peebles, EH45 8RN Scotland

Company Details:
Suppliers of fine luxurious cloth for apparel and interiors.

Tel: +44 1721 720101
Website: www.hollandandsherry.com
Email:
enquiries@hollandandsherry.co.uk

Johnstons of Elgin
Newmill
Elgin IV30 4AF

Company Details:
A vertical mill that carries out all processes. They also have a knitwear factory located in Hawick in the Scottish borders. Johnstons Cashmere is a brand in its own right and Johnstons also do private label.

Tel: +44 (0)1343 554 000
Website: www.johnstonscashmere.com

Joseph H. Clissold
Oldgate Mill, North Wing
Otley Road, Bradford BD3 0DH

Company Details:
Manufacturer of fine fabrics in worsted & luxury blends. Specialist designs & finishes. Celebrating 100 years of cloth manufacturing excellence.

Tel: +44 (0)1274 72145
Email: sales@clissold.co.uk
Website: www.clissold.co.uk

Scabal
Boulevard d'Anvers-Antwerpselaan
33/1000 Brussel-Bruxelles
Belgium

Company Details:
Scabal has evolved from a simple supplier of fabrics into a supplier of top quality fabrics to the most prestigious tailors and textile businesses around the world. Scabal has also become a designer and manufacturer of ready-to-wear menswear and personalised made-to-measure clothing. Scabal's production capacities are divided between a weaving plant in Yorkshire and a clothing factory in Saarbrücken.

Tel: +32 2 217 98 49
Website: www.scabal.us

Knitters:

Hawick Knitwear
PO Box 13331
Hawick
TD9 0WX

Company Details:
Classic and contemporary knitwear for men and women, knitted in Hawick, Scotland, from finest natural fibres including lambswool and Merino.

Tel: +44 1450 363 100
Email: sales@hawickknitwear.com
Website: www.hawickknitwear.com

Robert Mackie of Scotland
Holm Mill, Stewarton, Ayrshire
Scotland KA3 5HT

Company Details:
Manufacturers of traditional Scottish bonnets (Balmorals and Glengarries) and men's and women's accessories from lambswool and Merino
The Company operates from its 25000 sq ft site at Holm Mill in Scotland where over 50 employees are based.

Tel: +44 (0)1560 482124
Email: info@robertmackie.com
Website: www.robertmackie.com

6. Glossary

A

AFGAHLAINE
Lightweight dress fabric with a slight brushed finish.

ANIONIC
Chemicals carrying a negative charge.

B

BARATHEA
Closely woven fine wool cloth having a pebbled appearance and a satin finish.

BEDFORD CORD
Strong fabric with pronounced ridges. Used traditionally for riding breeches and men's trousers.

BIRDSEYE
Fine worsted wool cloth, with an effect of weave and colour said to resemble a bird's eye.

BLAZER CLOTH
A variety of hardwearing flannel or melton, used traditionally for blazers.

BLENDING
This involves mixing various farm/sale lots of a similar description together to make larger lots of a particular and more consistent type.

BLISTER
Weft knitted fabric with the surface exhibiting a characteristic blister effect.

BOBBIN (SPINNING)
Tube containing spun yarn.

BOBBIN (WEAVING)
Tube to be inserted into shuttle.

BOTANY
A term applied to merino wool. Originated from Botany Bay in Australia.

BOUCLE
The name comes from the French to 'buckle' or 'curl' and the textured fabric is woven or knitted from looped yarns which give it a characteristic curl.

BROADCLOTH
Rich, lustrous twill, made from plain woollen yarns. Originally, broadcloth referred to any fabric wider than the standard 29 inches in particular, woollen shirting rather like coarse flannel.

C

CAMEL HAIR
Usually woven with wool to create a glossy, soft and lustrous fabric.

CARDIGAN
Rib type structure for heavy weight knitwear.

CARDING
A step in preparing wool fibres for spinning. Fibres are disentangled and mixed by a large number of interacting rollers clothed with teeth of various sizes and densities. The rollers produce an even web of fibres which is drawn together in a rope-like structure called a sliver.

CATIONIC
Chemicals carrying a positive charge.

CAVALRY TWILL
Traditionally a strong, hard wearing cloth; it has pronounced diagonal cord effects.

CHALLIS
Supple, lightweight wool worsted, often printed.

CHECK
A pattern woven or printed in squares, either solid colour or outline, is a check. Best known are:

- Broken check: Each check is irregular
- Glen check: Descriptive of many different checks of Scottish origin, small and even and in any colour combination, with a large overcheck
- Gun club: Very small check
- Hounds-tooth: A type of broken check (in smaller versions known as Puppytooth and Dogtooth)

CHENILLE
The French word for 'caterpillar' gives us chenille: certainly its tufted weft yarn does resemble a fluffy caterpillar!

CHEVIOT
Wool fabric with a rough surface, similar to serge - originally made of wool from sheep bred on the Cheviot Hills.

COMBING
A step in preparing wool fibres for spinning. This process is carried out after gilling. Combing is carried out to remove short fibres. The short fibre waste is called noil.

COOL WOOL
Lightweight, dry handle wool cloth made of worsted yarn (330 grams per running metre as the maximum weight).

COUNT (Yarn)
A method of relating the weight and length of a yarn (woollen count, worsted count, tex).

CREPE
Is a crisp, lightweight fabric with an irregular wrinkled surface, an effect obtained by using highly twisted yarns in a random weave.

CREPE YARN
High twist yarn.

CRIMP
The waviness or curl in the wool fibre.

CROPPING
To cut loose fibres or yarn from the (shearing) surface of a fabric. In worsted cloths the aim is to remove all such fibres close to the actual cloth surface - giving a 'clear' finish. Woollen cloths are only cropped when a level surface of milled fibres is required.

D

DECATISING
Steam setting of fabric.

DONEGAL TWEED
Originally hand-spun Irish tweed from County Donegal, but a name now also applied to many machine - woven tweeds, herringbones or twills that have coloured spots or slubs woven into the fabric.

DOUBLE FACE
A fabric so constructed that it can be used on either side.

DOUBLE JERSEY
A knitted fabric produced on two sets of needles.

DRESS-FACES FINISH
A cloth finish characterised by a close-cropped surface and high lustre.

F

FACE
The side of a fabric which is intended to be the use surface or which is to be visible in an end product.

FACE-CLOTH
A sleek, glossy, luxurious woollen cloth.

FANCY WOOLLEN
A lightly milled fine woollen cloth produced by using colour and weave effects.

FELTING
The matting together of fibres during processing or in use.

FLANNEL
This soft milled woollen or worsted fabric can have either a plain or twill weave and is slightly napped on one side.

FOLDING
Two or more singles yarns twisted together.

FRIEZE
Heavy woollen over-coating with a rough hairy surface, with the nap laid in one direction.

G

GABERDINE
Firm, tightly-woven twill with a fine diagonal rib effect, used in tailoring. First produced in the Middle Ages in Spain, where the Spanish word 'gabardina' meant protection from the elements.

GAUGE
A term which is used to describe the thickness and spacing of the needles in machine knitting. Many different systems are in use and depend on the type of knitting machine (fully fashioned, Raschel, circular). Can be needles per 1 inch, 1.5inches, 2 inches etc.

GILLING
Step in fibre preparation before spinning. The process involves pulling the fibre through course toothed combs to align the fibres further following carding.

GRENADINE
Open gauzy-weave dress fabric.

GREY (FABRIC)
Unfinished fabric in the form straight from the knitting machine or weaving loom.

H

HARRIS TWEED
Name is a registered trademark for cloths actually spun, dyed and woven in the Hebrides islands of Harris and Lewis where the industry has existed for over 300 years.

HEATHER MIXTURE
Cloth or yarn - usually of Scottish origin - in colours reminiscent of the shades of heather north of the border.

HERRINGBONE
A fabric in which reversing twill weaves give a herringbone effect.

HONEYCOMB
Cellular effect on wool cloth that resembles the honeycomb of the bee (alternatively known as waffle).

HOPSACK
Slightly coarse open weave cloth, simply constructed.

J

JACQUARD
Joseph Marie Jacquard invented a new weaving loom at the start of the 19th-century, revolutionizing the industry by making it possible to weave, mechanically, large and intricate designs (like brocade).

JERSEY
Versatile wool fabric, machine-knitted either flat or tubular, in single or double jersey.

K

KARAKUL
Wool from the Karakul breed of sheep.

6. Glossary *Continued*

L

LAMB'S WOOL
Wool from the fleeces of lambs (young sheep up to 8 months old or up to weaning).
Note 1: This definition applies irrespective of the breed or type of sheep.
Note 2: It has been common practice in the trade to apply the term 'lambswool' to textile products, having a soft handle, made from 100% virgin wool of which at least one- third is lamb's wool as defined here.

LODEN CLOTH
A soft, thick, wind and water resistant wool cloth first in the 16th-century by hand weavers in the Austrian village of Loderers, using the oily, coarse wool of mountain sheep.

M

MARL
A double yarn made from two different coloured single yarns.

MELANGE
Cloth made from a mix of different colours printed on the fibres (from the French for 'mixture').

MERINO
The finest and highest quality wool available. The merino breed of sheep originated in Spain, where the word meant 'roving from place to place'.

MELTON
Close woven, heavy duty wool cloth with short nap; created originally in Melton Mowbray as a fabric for hunting outfits.

MICRON
Describes the thickness of a wool fibre in Billionths of one metre.

MILLING
Process of consolidating fabrics, altering the handle and can obscure the fabric structure.

MOHAIR
The long, lustrous, silky hair of the Angora goat produces a smooth, glossy somewhat wiry fabric.

MOUFLON
Milled and raised woollen spun cloth. Normally with a vertical pile.

MOUSSELINE
A plain weave wool cloth, lightweight and often printed.

N

NAP
A surface, produced on a fabric, in which part of the fibre is raised from the structure.

NEP
A small knot of entangled fibres, sometimes used as a decorative effect.

NUN'S VEILING
One of the lightest, finest plain weave worsted dress fabrics, with a soft handle (also known as wool voile).

O

OPENING AND SHAKING
Removal of vegetable matter prior to scouring.

P

PAISLEY
Fine wool fabric with distinct abstract scroll designs, created originally in the Renfrewshire town, Paisley, and used for shawls.

PIECE DYED
Dyeing in fabric form.

PILLING
Term used when fibres gather into small balls on the surface of a fabric. These balls are called 'pills'.

PIQUE
Either:
- A woven cloth with pronounced card effect
- A jersey cloth made with alternative slightly raised stitches

POPLIN
Avignon in the 14th-century was the Papal headquarters and 'papalino', as it was called by the Italian weavers, was woven for ecclesiastical vestments. Today, this luxury cloth, still sometimes produced in wool, has a crosswise rib and is very hard-wearing.

PRESSING (ALSO CALENDERING)
Enhances fabric appearance by application of pressure to increase lustre and smoothness.

PUNTO-DI-ROMA
Reversible interlock type double jersey fabric with slight horizontal lines (Also Ponte Roma).

PURE NEW WOOL
Virgin wool direct from the sheep's back, that has not undergone a recycling process (not previously spun or felted).

R

RAISING
A mechanical brushing of dried often-milled (qv) cloth to produce a bulky layer of fibres on the surface of the cloth face.

RASCHEL
Fabric produced from a warp knitting machine using latch needles.

RELAXATION SHRINKAGE
The relaxation of stresses and strains in a fabric which have built up in processing.

REVERSIBLE
Double cloth wool fabric with separate layers, woven together by fine thread to give a two-way effect so that either side may be used.

RIB KNIT
Fabric or knit created by alternating plain and purl stitches; elastic properties often used for cuffs and welts.

S

SAXONY
Originally, name give to high quality fine woollen cloth made from wool of Saxony sheep bred in Germany; today, term also applied to high-grade fabrics in merino wool.

SCOURING (Loose wool)
Washing the wool to remove impurities eg. grease, suint, and dirt.

SELVEDGE
Edge of woven fabric running parallel to the warp yarns, sometimes with a name woven into it.

SERGE
Sturdy, hard-wearing worsted fabric - a twill weave showing a diagonal stripe.

SETT
Density of warp and weft yarns in a woven fabric.

SHARKSKIN
Woven fabric with a smooth slightly lustrous surface and a firm handle.

SHEARING
Removal of unwanted fibres from a fabric surface.

SHETLAND
Yarn produced on woollen system from 100% wool with a characteristic handle (common usage).

SINGLE JERSEY
A weft knitted fabric made on one set of needles.

SINGLE YARN
A thread produced by one unit of the spinning machine.

SLIVER
An assemblage of fibres in rope form without twist.

SLIVER KNITTING
Trapping wool fibre from a top into a knit structure.

SLUB
Imperfections in a yarn producing nobbly balls or thicker strands. Sometimes used as a decorative effect.

SLUBBING
The name given individually or collectively, to relatively thick fibrous strands. also to strips of web from a condenser-type card that have been consolidated by rubbing.

SPACE DYEING
Produces multi-colour yarns by applying various colours at intervals along a yarn.

STOLLING
Button and button hole bands for knitwear.

T

TRICOT
From the French for 'knitting'. Often applied to plain knit structures.

TWEED
Rough-surfaced woollen cloth, in either plain, twill or herringbone weaves, originally hand-woven in the villages on the banks of the River Tweed, bordering England and Scotland. Today a generic name encompassing textured, multi-coloured or plain woollen cloths in various weaves and yarns.

TWILL
Basic weave with a distinct diagonal line, the word comes from the Scottish 'tweed'.

V

VELOUR
Soft, closely woven smooth fabric with thick short pile laid in a single direction, produced in wool, cotton or silk (from the French for 'velvet').

VENETIAN
Smooth luxury wool fabric with glossy, satin weave.

VIYELLA
The trade-name of William Hollins & Co., Viyella has the looks of an all-wool twill-weave cloth but is, in fact, a wool and cotton blend.

W

WALE
A column of loops along the length of a knitted fabric.

WARP
Yarns running lengthwise in a woven fabric.

WARP KNITTING
Method of knitted fabric production predominantly in the warp direction (vertically).

WEFT KNITTING
Method of knitted fabric production predominantly in the weft direction (horizontally).

WHIPCORD
Generic name for many twill-weave fabrics with a pronounced cord, though more particularly a worsted fabric with strong, round cords.

WOOLLEN
Is usually made from short wool fibres where the fibres are not parallel, Produces fabrics of a full, bulky handle.

WORSTED
Worsted is made from wool fibres that lay parallel to one another, and is usually woven into tight smooth fabric.

Y

YARN, FOLDED: DOUBLED YARN
A yarn in which two or more single yarns are twisted together in one operation, eg. two-fold yarn, three-fold yarn, etc.
Note: In some sections of the textile industry, e.g, the marketing of hand - knitting yarns, these yarns would be referred to as two-ply, three-ply, etc.

7. A bit of history

Key moments in the history of wool

1788 The first sheep arrived on Australian shores.

1797 Some of the first Spanish Merino's were brought to Sydney from South Africa and were acquired by Johh Macarthur, a soldier, and Samuel Marsden, a clergyman. Away from their native Spain the Merino changed due to different climatic conditions. In Australia the Merino began to develop in a distinct way, noted for the whiteness of its fleece and soft touch.

1807 In November the Reverend Samuel Marsden, returned to England from Sydney with his cask of Australian wool. In the same year John Macarthur sent more than 400lbs of wool back to England which sold at 45d Ilb.

1843 Thomas Mort set up the first wool auctions in Sydney.

1850 Between 1830 and 1850 the value of wool exports increased from 2 million to 41 million (AUD).

1870 Australia became the world number one producer /supplier of wool surpassing the quantity produced in Britain.

1895 - 1902 The federation droughts cut sheep numbers by 50 million leaving just 53.7 million sheep in Australia.

1916 Wool was a valuable fibre in the First World War for military uniforms.

1934 Japan became increasingly important as a buyer of Australian Merino wool.

1937 The International Wool Secretariat (IWS) was formed and the formula for its funding by the three original partner countries, Australia, New Zealand and South Africa agreed.

1939 Wool was so important to the war effort that Britain bought all of Australia's wool for the duration of World War II.

1964 The Woolmark logo was created by Italian graphic artist Francesco Soroglia in Milan.

1970 Australia had a record 180 million sheep.

1975 IWS developed and launched Easy Care Superwash allowing wool to be machine washed.

2000 Merino wool moves into the sports and leisure market with the development of Sportswool in partnership with Manchester United Football Club.

2007 Commemoration of the 200 year anniversary of the beginning of trade for the Australian wool industry.

2010 Launch of Campaign for Wool with Patron His Royal Highness The Prince of Wales.

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WOOLMARK