

**MERINO WOOL  
UNIFORMS  
TOOLKIT**



WOOLMARK

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# MERINO WOOL ENGINEERED BY NATURE, BUILT FOR WORK

## UNIFORM APPLICATIONS



Aviation



Corporate



Defence



Education



Healthcare



Hospitality



Retail



Security

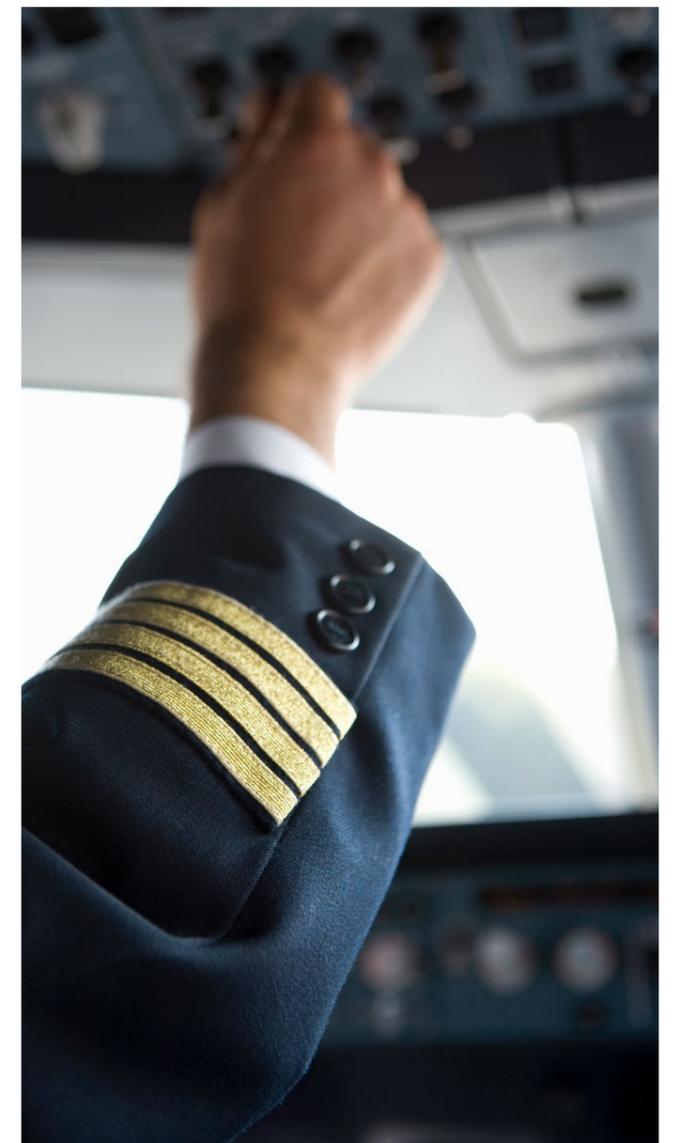
## FOR GENERATIONS, WOOL HAS BEEN VALUED FOR ITS PROTECTIVE QUALITIES.

Today, these same attributes make Merino wool an ideal fibre for uniforms and workwear. Whether for corporate wear, aviation, hospitality or education, Merino wool delivers natural performance benefits that enhance comfort, durability and safety on the job.

## PERFORMANCE MEETS PURPOSE

Merino wool's versatility makes it perfectly suited to the demands of modern workwear. Its natural ability to regulate temperature, manage moisture and resist odour ensures comfort and performance across a wide range of working conditions. From lightweight next-to-skin layers that keep workers cool and dry, to insulating mid-layers that retain warmth while allowing heat to escape, Merino wool provides adaptable comfort throughout the day. In outer garments, its resilience and weather resistance add another layer of protection against wind, rain and extreme temperatures.

Beyond comfort, the Merino wool fibre can be engineered for specialised performance needs, including flame resistance, high visibility and durability. Merino wool blends effectively with other fibres to create fabrics tailored to the specific requirements of different professions, while maintaining a natural, breathable feel.



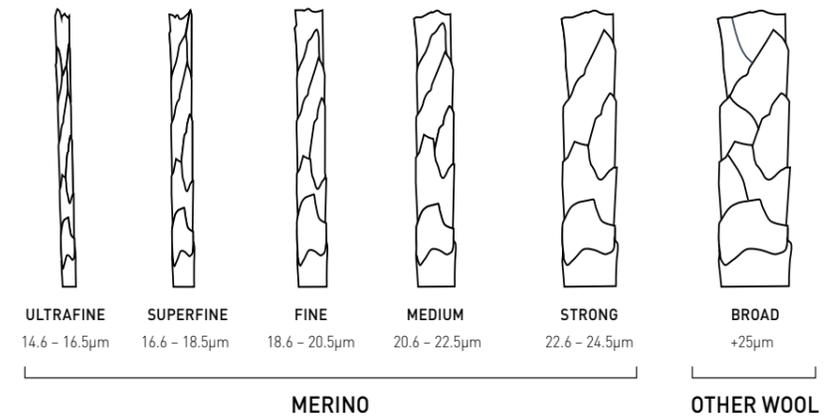
# AUSTRALIAN MERINO WOOL

Australia is the world's **LARGEST** and leading producer of Merino wool, where it's grown year-round by the country's **63 MILLION** sheep.



## THE WORLD'S FINEST WOOL

Merino wool comes from the Merino breed of sheep and is globally recognised as the softest, finest type of wool. Its fibre diameter, measured in microns, provides both comfort and performance. The result is a fibre that is soft next to the skin and technically able to meet the toughest demands of professional workwear.



## RESPONSIBLE FARMING AND SUSTAINABILITY

Most Australian Merino wool-growing farms are family owned and operated, with unique skills and a great sense of pride passing from generation to generation.

Australian woolgrowers ensure their sheep are cared for to provide high standards of animal welfare.

For generations, Australian woolgrowers have shown how the Australian rural landscape can be managed effectively while protecting the natural environment, supporting rural communities and meeting environmental needs.



# FROM NATURE FOR NATURE

**Wool is a natural, renewable, biodegradable and recyclable fibre and commonly refers to those fibres produced by sheep. However, not all wool from sheep is the same. There are more than 1000 breeds of sheep across the world which produce different types of wool, used for various purposes.**



## RENEWABLE

Wool is harvested from sheep and their fleece continually regrows from one year to the next. Each wool fibre grows around 6mm per month and just like human hair, it continues to grow, even after it has been shorn. Grazing on grass, every year sheep will produce around 4.5kg of new fleece; making wool a completely renewable fibre source.<sup>1</sup>



## RECYCLED AND RECYCLABLE

Wool is the most recycled apparel fibre in the world supported by a well-established and commercially viable recycling industry. Wool garments are 3 times more likely to be donated when compared to garments of other major fibre types.<sup>4</sup>



## BIODEGRADABLE

As a natural fibre, wool biodegrades on land and in water.

100% Merino wool fabrics can biodegrade by 95% after 15 weeks of burial in soil, but the rate varies with soil, climate and wool characteristics.<sup>2</sup>

Wool fibres also biodegrade in a marine environment and do not contribute to microplastic pollution. Research has shown that the Chlorine-Hercosett anti-shrink treatment applied to wool (which enables wool garments to be machine washable) can accelerate biodegradation.<sup>3</sup>

<sup>1</sup> Australian Wool Production Forecast Report, April 2024

<sup>2</sup> Hodgson A, Leighs SJ, van Koten C. Compostability of wool textiles by soil burial. *Textile Research Journal*. 2023;93(15-16):3692-3702. doi:10.1177/00405175231163590

<sup>3</sup> Collie, S., Brorens, P., Hassan, M.M. et al. Marine Biodegradation Behavior of Wool and Other Textile Fibers. *Water Air Soil Pollut* 235, 283 (2024).

<sup>4</sup> Russell, S., Swan, P., Trebowicz, M., Ireland, A. (2016). Review of Wool Recycling and Reuse. In: Figueiro, R., Rana, S. (eds) *Natural Fibres: Advances in Science and Technology Towards Industrial Applications*. RILEM Bookseries, vol 12. Springer, Dordrecht. [https://doi.org/10.1007/978-94-017-7515-1\\_33](https://doi.org/10.1007/978-94-017-7515-1_33)

# THE THREE-LAYERING SYSTEM

For uniforms and workwear apparel, the three-layering system – which includes base-, mid- and outer-layers – gives the wearer the opportunity to adjust their clothing to the environment as well as to activity level. The unique moisture management, buffering, insulating and breathability properties of the Merino wool fibre work seamlessly together through all three layers, no matter the conditions: hot, cold or humid.

Mid-layer thickness slows down heat loss, keeping the wearer warm.

**WIND & RAIN RESISTANCE**

Moisture vapour is released into the atmosphere, reducing the possibility of condensation, to keep both the fabric and the wearer dry.

BODY WARMTH >>>

PERSPIRATION >>>

PERSPIRATION

BASE – LAYER

MID – LAYER

OUTER – LAYER / GEAR



# MERINO WOOL BENEFITS



## Water Resistant

Specialised wool fabrics, including Optim™, increase hydrostatic head and enhance water resistance.



## Wind Resistant

Specialised wool fabrics, including Optim, reduce air permeability, enhancing wind resistance and improving wearer comfort.



## Temperature Regulation

Merino wool is an active fibre that reacts to body heat. It helps workers stay cool in hot conditions and warm in the cold, maintaining stable microclimates under varying workloads and weather conditions.



## Odour Resistance

Merino wool's fibre structure locks away odour molecules until the fibre is washed. This keeps garments fresher for longer and reduces washing needs, which is a practical benefit for work uniforms and multi-shift usage.



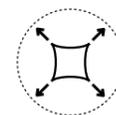
## Moisture Management

Work environments often demand long hours and varying physical intensity. Merino wool naturally absorbs and gradually transfers moisture vapour away from the skin, reducing sweat build-up and helping to prevent post-activity chill.



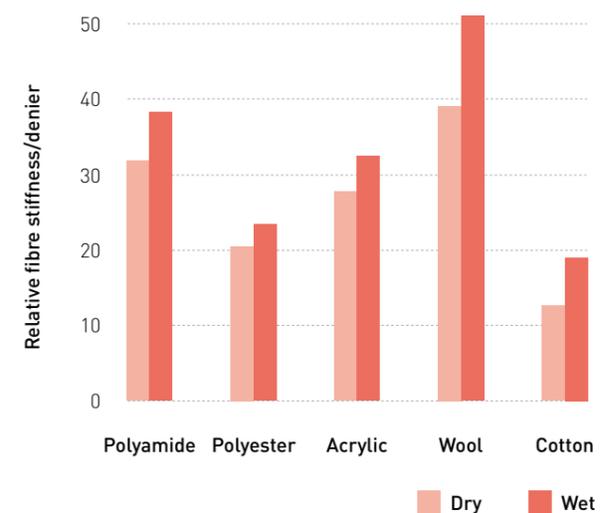
## Breathability

Merino wool's unique structure ensures continuous airflow. It buffers changes in humidity, reducing clamminess and improving comfort for workers in both active and resting phases.



## Elasticity

Merino wool fibres can bend thousands of times without breaking. This gives garments excellent shape retention and resilience, ensuring long-lasting performance even under daily wear and demanding conditions.



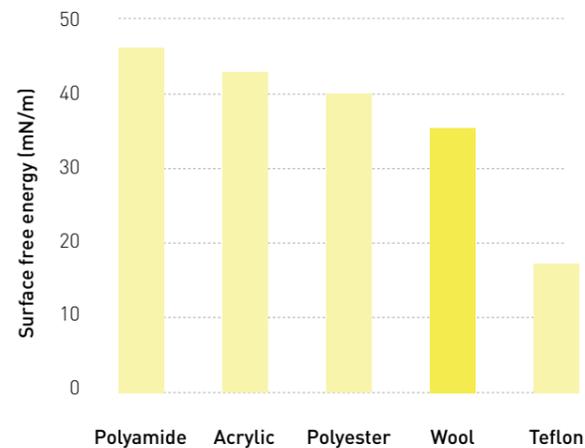
Source: CSIRO Factsheet





### Stain Resistant

Merino wool fibres have a natural protective outer layer that helps prevent stains from being absorbed. And because Merino wool tends not to generate static, it attracts less dust and lint.

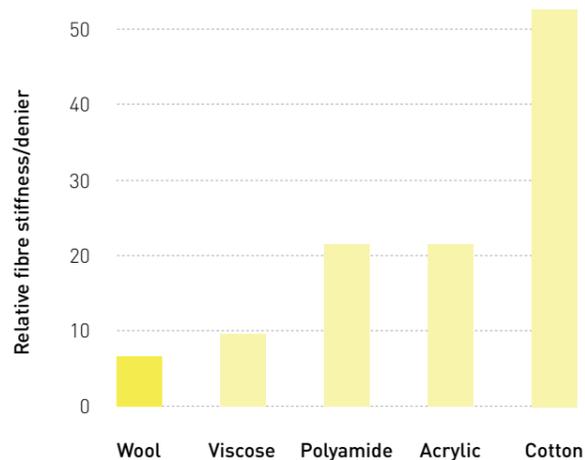


Source: Wool: Nature's Wonder Fibre, Written By John Leeder Page 25

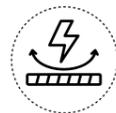


### Drape

Wool fabrics 'flow' around the body rather than just cover it, creating elegance and flair.



Source: Wool: Nature's Wonder Fibre, Written By John Leeder Page 18



### Anti-Static

Because Merino wool can absorb moisture vapour, it tends not to create static electricity, helping it to drape well and be less likely to cling uncomfortably to your body than other fabrics.



### Wrinkle Recovery

At microscopic level, each Merino wool fibre could like a spring that returns to its natural shape after being bent. This gives Merino wool garments a natural resistance to wrinkles.



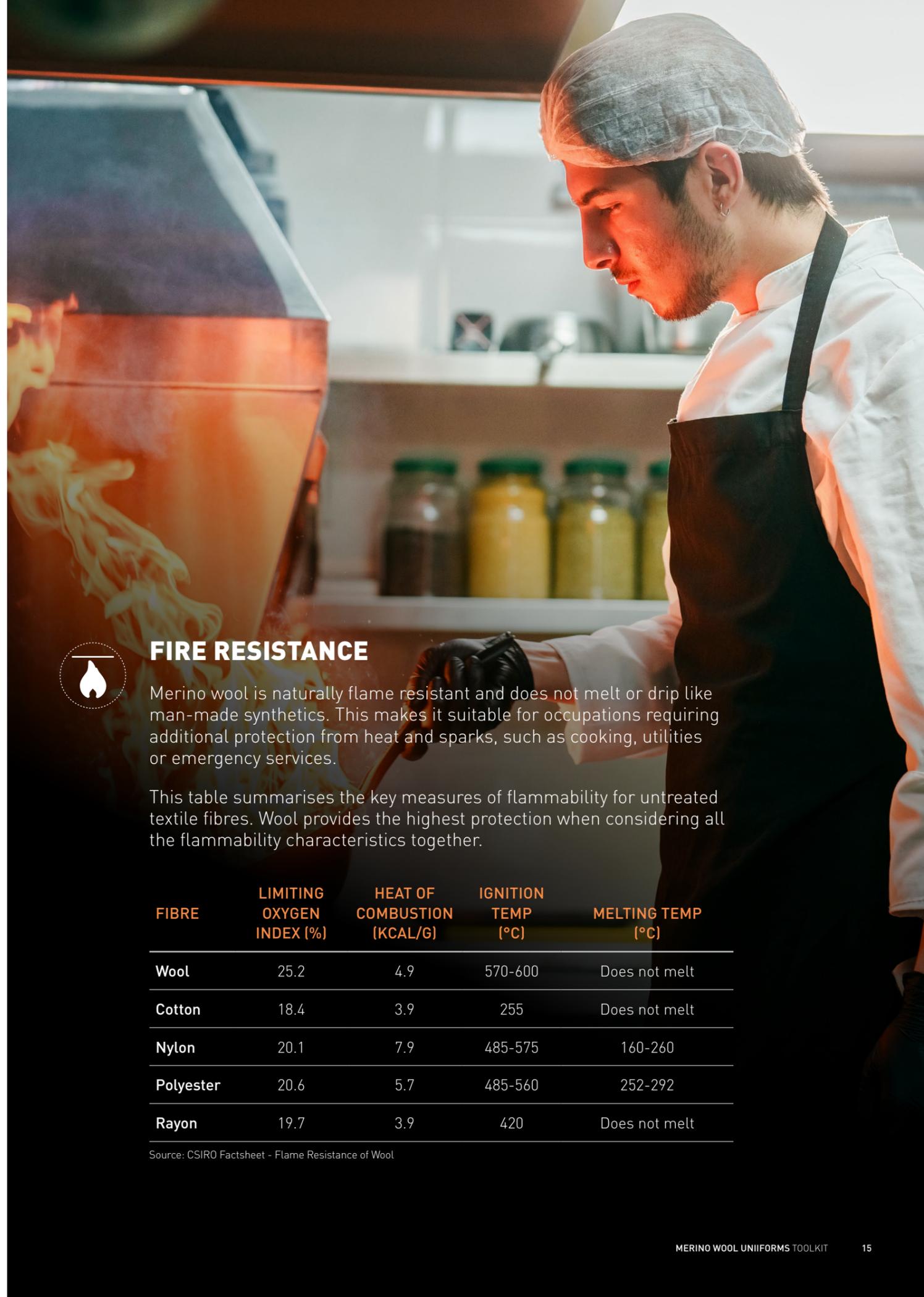
### FIRE RESISTANCE

Merino wool is naturally flame resistant and does not melt or drip like man-made synthetics. This makes it suitable for occupations requiring additional protection from heat and sparks, such as cooking, utilities or emergency services.

This table summarises the key measures of flammability for untreated textile fibres. Wool provides the highest protection when considering all the flammability characteristics together.

FIBRE	LIMITING OXYGEN INDEX (%)	HEAT OF COMBUSTION (KCAL/G)	IGNITION TEMP (°C)	MELTING TEMP (°C)
Wool	25.2	4.9	570-600	Does not melt
Cotton	18.4	3.9	255	Does not melt
Nylon	20.1	7.9	485-575	160-260
Polyester	20.6	5.7	485-560	252-292
Rayon	19.7	3.9	420	Does not melt

Source: CSIRO Factsheet - Flame Resistance of Wool



# DYNAMIC BREATHABILITY

## DESIGN FOR THE DYNAMIC

A recent PhD study from North Carolina State University confirms that 100% wool base-layers offer superior thermal comfort for “stop-go” outdoor sports (like hiking, cycling and rock climbing), compared to fabrics like cotton, viscose or polyester, when garments of similar weight and thickness are used.

Wool’s natural fibre structure absorbs moisture during activity, then moderates its release during rest, while its hydrophobic outer surface delays rapid evaporation and cooling.



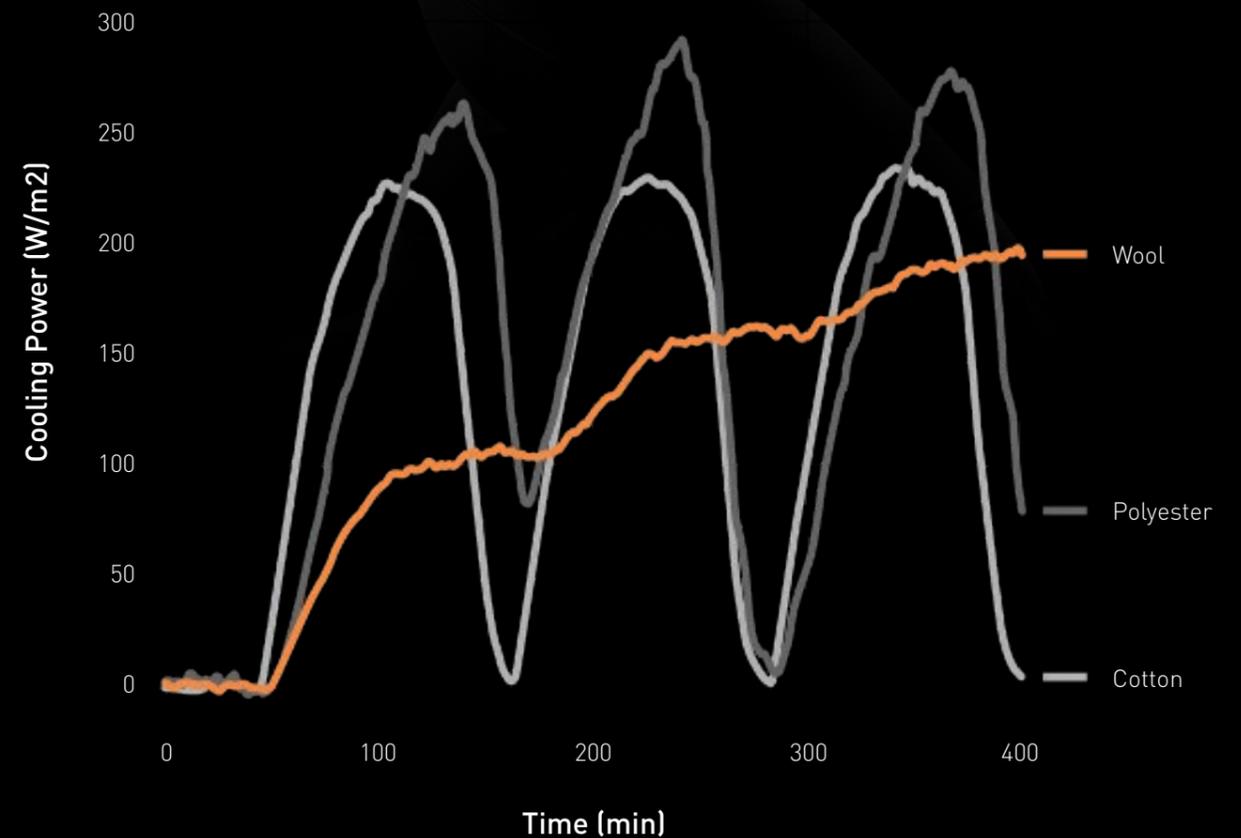
LEARN MORE

## THE FINDINGS

Rapid thermal changes are greatly moderated by wool.

- 1. Wool has superior buffering of heating and cooling.**  
It helps wearers maintain an optimal microclimate in dynamic environments.
- 2. Wool gradually delivers more cooling as the need increases.**  
Workers typically require more cooling as their job progresses.
- 3. The risk of after-chill is reduced.**  
Workers in polyester or cotton may experience unwanted after-chill during resting phases.

## COMPARATIVE RESULTS



## UNIFORMS

# FINANCIAL INDUSTRY UNIFORM PROJECT

The Financial Industry Wool Uniform Project was based on market research findings, taking into account social context and changes in lifestyles. Through five major themes, the project introduced a brand-new design concept, selected innovative fabrics, and highlighted the advantages of Merino wool in professional and uniform wear.

The five themes are Wellbeing Awakens, Classic Retro, Nature Trackback, Individualism, and Digital Era. The project brought together 16 leading enterprises from China's wool industry, including top makers, spinners, weavers, knitters and garment manufacturers to establish a strong wool uniform supply chain and present a dedicated wool financial industry uniform collection to the industry.

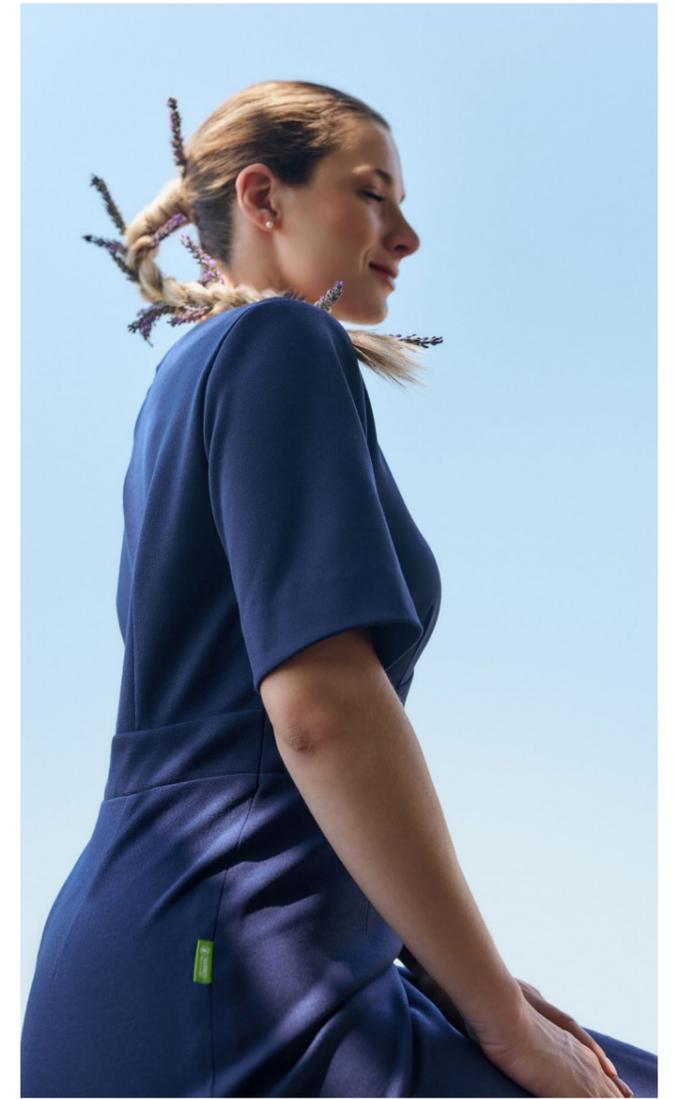
## UNIFORMS

# WOOLMARK SKYPRO WOOL KNIT UNIFORMS

Using Merino wool in uniforms offers a variety of performance benefits, from comfort and stretch to thermoregulation and odour resistance. To turn this vision into reality, Woolmark partnered with SKYPRO, a trusted industry leader known for developing smart uniform solutions for global clients in aviation, hospitality and beyond.

SKYPRO worked closely with one of Portugal's oldest and most respected wool mills, to develop two new wool knits specifically tailored for professional use. These fabrics meet Woolmark's strict certification standards, ensure breathability, durability and full washability, delivering long-lasting performance and low maintenance care without compromising aesthetic standards.

This is a pioneering solution that responds to the evolving needs of modern professionals: uniforms that look sharp, feel comfortable and support operational efficiency through simplified garment care.



The partnership with Woolmark reflects SKYPRO's ongoing mission to improve every stage of the uniform lifecycle, from material sourcing to end-user experience. This project illustrates how collaboration between two industry leaders can explore new potential for wool in sectors where performance and practicality are equally critical.

## UNIFORMS

# FARAGE AUSTRALIAN DEFENCE FORCE



All female personnel in the Australian Defence Force (ADF) have an entitlement to wear a wool blend General Duty dress produced by Australian clothing brand and Woolmark licensee Farage.

Australian wool is included in the General Duty dress worn by female personnel across the tri-service of the Australian Defence Force (ADF): the Royal Australian Navy, Australian Army, and Royal Australian Air Force. Introduced in 2020, it is a completely new item of non-combat clothing for the ADF, providing female personnel with the option of wearing a tailored dress.

Renowned Australian brand Farage was contracted by the ADF in 2019 for the design and production of several corporate garments, in particular the General Duty dress.

Farage had previously designed and produced uniforms for the flight crew of the Royal Australian Air Force's 33/34 Squadron, a dedicated fleet servicing Australia's top ministers and international delegates.

Following successful trials of the General Duty dress by ADF personnel, from across a variety of ranks, the garments commenced being issued to female personnel in October 2020.

Farage worked with Woolmark on a wool blend fabric comprising 40% wool along with polyester, nylon and elastane for enhanced elasticity.

The dress is Woolmark certified and carries the 'Wool blend performance' logo. It is a short-sleeved, scoop-necked and knee-length dress that has been produced in brown for the Australian Army, black for the Royal Australian Navy and blue for the Royal Australian Air Force.

Farage has also produced a trench coat, for men and women, which has been produced for some personnel in the Royal Australian Navy and Royal Australian Air Force.

## UNIFORMS

# HUGO BOSS

BOSS and Woolmark introduced the first fully knitted Merino wool blend suit, a significant innovation in comfort, craft and style. Building on Merino wool's long history in tailoring, the suit brings the fibre's natural benefits into a modern performance setting. These benefits include temperature regulation, natural elasticity, superior softness and resistance to stains, odours and wrinkles. Using state of the art knitting machinery, the suit is created in one seamless, fully fashioned process that results in less fabric waste than traditional tailoring. The specially developed Merino wool-rich yarn provides flexibility, durability and comfort while maintaining a clean and tailored silhouette.

This collaboration combines traditional craftsmanship with technical knitwear engineering to create a versatile suit crafted to meet the needs of the modern wearer. The BOSS and Woolmark knitted suit shows how natural fibre, thoughtful innovation and innovative production can redefine what a contemporary suit can be.



UNIFORMS

# WOOLMARK X NISSAN: NATURAL BORN INNOVATORS



Woolmark partnered with Nissan's Formula E racing team as technical partner for Season 9 of the ABB FIA Formula E World Championship, bringing Merino wool performance innovation into the heart of electric motorsport. Using Merino wool in the team kit delivers a variety of functional benefits, including natural moisture management, temperature regulation and resistance to odour.

Working closely together, the partners created a complete system of base-layers, mid-layers and outer-layers engineered from Merino wool blends selected for comfort and durability.

Each fabric meets Woolmark's strict certification standards and offers breathability and full washability, supporting the demanding needs of a global race team. This project demonstrates how a renewable natural fibre can enhance performance environments, offering garments that feel comfortable, maintain body temperature across climates and simplify garment care. The Woolmark and Nissan collaboration highlights the growing potential for wool in high pressure settings where comfort, functionality and practicality must work together.



UNIFORMS

# PRADA LUNA ROSSA PIRELLI

*"The last edition proved how Merino wool is the perfect partner to ensure high-quality performances thanks to its natural qualities. We are pleased to extend the presence of this 100% natural fibre also in the training uniforms, underlining once again the team's commitment to safeguarding the oceans."*

Lorenzo Bertelli  
Prada Group Marketing Director & Head of Corporate Social Responsibility



Woolmark and the Luna Rossa Prada Pirelli sailing team have developed ground-breaking Merino wool technical garments worn by the team across all training and sailing activities during the 37th America's Cup held in Spain in 2024.

Woolmark worked closely with the Luna Rossa Prada Pirelli product development team to expand the sailing team's current kit to include performance-first apparel for cycling, running and gym-based training activities. The latest custom-made kit includes Merino wool-rich T-shirts, hoodies, shorts, leggings, a cycling suit, a waterproof jacket and a revolutionary ultralight windbreaker. At just 60gsm, the 55% Merino wool windbreaker is wind-proof due to the density of the weave and the presence of the Merino wool fibre to ensure superior breathability.

The cycling suit has also been specially designed to meet the demanding conditions that the Luna Rossa Prada Pirelli team will face. Using an innovative Merino wool-rich fabric, the interlock suit delivers enhanced temperature regulation and moisture management benefits, excelling in different weather conditions and activity intensity levels.

With a focus on technical performance, and the added benefit of not contributing to microplastic pollution in the world's oceans, Merino wool proves to be the preferred fibre for Luna Rossa Prada Pirelli.

## UNIFORMS

# QANTAS X WOOLMARK: COME FLY WITH ME



The combination of Merino wool and Qantas was a natural fit given the place both hold in Australia's national character, with both being central to the fabric of the nation.

In 2015, Australian fashion designer Martin Grant created a navy wool suit in a classic modern design features linking back to the first Qantas pilot uniforms from the 1930s.

Designed for high levels of comfort and different climates, the uniform consisted of a single-breasted Merino wool suit in a streamlined cut with a narrow trouser for males, and a more feminine version for women, including a specific female tie.

Based on the iconic Qantas trench, the pilot uniform included a water resistant trench coat in bonded lightweight wool for both practicality and tailored appeal.

Grant said the new design was inspired by the classic military and naval-style pilot uniforms and reflected feedback from pilots who wanted a uniform that was modern, wearable and recognisable.

"I strived for a design that is traditional yet modern. I wanted to create a uniform that reflected the glamour of flying and suit the unique pilot office environment," Grant said.

A range of knitwear made from 100% pure wool jersey is also available for added warmth, with a vest for men and a cardigan for women, both in French navy.



# WOOLMARK IS THE GLOBAL AUTHORITY ON WOOL.



## TECHNICAL TEAM

Our dedicated technical team of experts have specialist knowledge in all areas of the supply chain and are available to assist our partners with technical transfer, troubleshooting, process and product development and supply chain optimisation. We develop new processes and products bespoke to our partners to commercialise innovations in yarns, textiles, garments, products and processes.

## SOURCING

We provide sourcing support for all tiers of the supply chain with direct access to the global wool manufacturing industry, The Wool Lab and bespoke material sourcing. The Wool Lab is a premier sourcing guide to the world's best commercially available wool fabrics and yarns, sourced from more than 100 of the world's best spinners, knitters and weavers in our global supply network.

## SUPPLY CHAIN OPTIMISATION

We partner with designers, brands and retailers to commercialise new wool product lines. We offer design team support with supply chain assistance, quality assurance, seasonal consultation, product innovation and marketing.

## INDUSTRY RESEARCH

We take the lead in funding and delivering research that innovates what wool is capable of, and ensure what wool means to the market is ever-evolving. These breakthroughs in fibre science, traceability and practices that promote sustainability and animal welfare are passed onto the industry and our partners have access to the latest research and information.

## TRAINING AND EDUCATION

Wool education programs for the entire wool supply chain, including free online learning via the Woolmark Learning Centre and custom training programs are delivered by Woolmark including staff training for brands and retailers.

## CERTIFICATION

We provide independent certification for quality wool products and the world's most iconic textile fibre brand – the Woolmark logo. Only Woolmark licensees, who have met strict performance and quality standards, can use the Woolmark logo on their products. The brand's use is administered through the Woolmark Certification Program.

## WOOLMARK LICENSEES

We promote our Woolmark licensees throughout our global network and support them with supply chain assistance, quality assurance, technical consultation, product innovation, marketing and promote their product throughout our network. Woolmark licensees have been awarded the Woolmark logo to signify the quality assurance of their product.



WOOLMARK  
PURE NEW WOOL



WOOLMARK  
MERINO PERFORM



WOOLMARK  
WOOL RICH BLEND



WOOLMARK  
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WOOL BLEND



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