As the market for performance clothing made from merino wool matures, new blends with Tencel and Cordura, among others, seek to keep the natural fibre's popularity alive and offset some of its shortcomings.

Blends bring new stories into merino wool



In 1995, when Icebreaker launched its first baselayers in pure merino wool, the sportswear industry had long since switched to synthetics and few believed there was a market for wool in next-to-skin clothing, even if it was said to be of the non-itchy variety. Nearly 20 years later, a walk down any aisle of a sports trade show or a flip through a brand catalogue will invariably feature a selection of clothing and accessories made in the natural fibre and supported by a long list of the benefits associated with it. Absence of odour often comes first, along with warmth (even when wet) and softness. Rarely are fast drying or durability mentioned. Then again, rarely does a single fibre have the resources to respond to all performance needs.

This is where blends are coming forward as a way to combine the best of both worlds, the practical aspects of synthetics (washability, durability) and the "oneness" with nature that wearing the product of a sheep's fleece provides, to use a term heard at Icebreaker.

The company that re-introduced wool in active sportswear is introducing a new Cool-Lite fabric in its spring-summer 2015 ranges. A blend of merino wool and Tencel, it is touted as combining "the benefits of premium merino wool and sustainably-produced wood fibre" and the new fabric "keeps wearers cool, dry and comfortable on even the hottest days of summer". Kurt Foster, global apparel merchandiser, says the company "blends up, not down" and that Tencel is "an obvious choice from an environmental perspective." Other advantages the combination offers are the possibility of lowering the weight of the end fabric from 150 grammes to 120 grammes, added durability, and faster wicking and drying. "It is a natural extension of our ranges for summer and it is featured in our women's yogawear range," he adds.

German sportswear manufacturer Ortovox launched its Tencel and merino blends three years ago. "In the lighter-weight baselayers, pure wool doesn't work so well," says Thomas Moe, the brand's designer and head of mountainwear. "We were also looking for a cooler hand and found that the merino-Tencel blend in a single jersey was the perfect cocktail."

Südwolle, a German wool spinner that supplies many of the premium brands that use merino wool, has seen demand rise for new fibre blends. "The market has changed and brands are looking for something new," says Christian Klieber, key account manager for Yarn in Motion, one of the company's branches that specialises in performance yarns. "Icebreaker and SmartWool have set the bar high, and they are among the many brands looking to make the most of merino wool's performance but also deliver a technical tweak."

Optimer's patented yarn technology Dri-release is based on blends of synthetic and natural fibres. "Typically, Dri-release combines 85% to 88% hydrophobic fibre content with around 15% of a hydrophilic fibre," says Lee Thompson, sales manager, adding that Tencel blends are currently the fastest growing category. Dri-release with merino wool is made with 88% polyester and 12% merino and dries four times faster than pure wool, says Mr Thompson.

In Taiwan, spinning, knitting and weaving company Chia Her has also developed a number of new blends with merino wool, including Tencel and Modal, which are currently seeing strong sales, says Chase Wong, chief marketing officer. The company also blends merino wool with Invista's high-resistance Cordura, in knit and woven fabrics.



German wool specialist Ortovox is using a Cordura and wool blend fabric (55% merino and 45% Cordura) for its summer mountain pants.

Ortovox / Hansi Heckmair

COPYRIGHT

Tencel and Cordura join the merino crew

Invista believes Cordura has much to offer in blends with the natural fibre. A series of knits, including a 60% wool-40% Cordura baselayer by Chia Her, has been developed from light to heavy weights (150grammes to 400 grammes per square-metre) to address all needs, from summer to more extreme conditions. "We have looked to make the best of Cordura's performance in matters of snag resistance, pilling and bursting in knits," says Tim Anson, Cordura marketing and development manager. Cindy McNaull, global Cordura brand and marketing director, adds that "the lighter you go, the more you need Cordura for durability".

The longevity that the polyamide 6.6 yarn is said to bring can be particularly useful in socks, another market segment the Cordura team has its eyes on. "Cordura is strategically placed at the toe and heel, either pure or blended," says Mr Anson, adding that nylon 6.6 also offers better wicking performance than merino alone would, thus increasing wearer comfort.

But that's not all that merino and Cordura can do together, as new developments also target woven fabrics. The US-based fibre producer has worked with Burlington Industries and Chia Her to develop lightweight suiting fabrics woven with an intimate blend of 70% merino wool and 30% Cordura. These fabrics have higher tensile-, tear- and abrasion-resistance, says Mr Anson. "We are looking to introduce wool in casual collections by offering something fresh," adds Burlington's creative marketing manager, Christopher Bass.

Australian Wool Innovation (AWI) is backing the woven merino trend with its own development based on a spinning technology known as Optim. Lars Ulvesund, global category manager for sports & outdoor applications, says this means 100% wool fabrics can be used in performance outerwear and he sees this as a way to "give wool a more casual feel while making it suitable for hiking clothing." Optim is a co-development by CSIRO and AWI in Australia in which the wool fibres are stretched and set in a series of processes, creating tighter weave textures that will resist water penetration.

Swiss weaver Schoeller has also developed a number of wool-based laminates, including one with a 100% merino wool face and a high visibility neon backing fabric in the Schoeller Shape range that targets fashion uses. For company spokesperson Dagmar Singer, these "urbanised" soft shells, in combination with a PCM coating (in a blend of phase-changing capsules that provide either a cooling or a warming effect) or in the WB-400 range, "create more links between fashion and function". In knits, Schoeller plans on rolling out single knits made in wool, lyocell and polyamide blends. All of these are said to be easy to wash, which adds to their appeal in active sportswear.



GOTS-certified and made in Germany, Engel Sports makes its base layers in a blend of merino wool and silk, a combination said to offer breathability, wearer comfort and an antibacterial effect that prevents the build up of odours.

Engel Sports, Pfullingen

Ortovox is one of the brands that has introduced merino blend woven fabrics to its collections, and these are one of the highlights of its spring-summer 2015 shorts and pants. Here again, blending is necessary for reasons of cost. "Pure merino wool would be too expensive," says Mr Moe, "so we chose a merino and Cordura intimate blend warp and weft fabric."

Organic fibre garment maker Engel Sports, based in Germany, works exclusively with natural fibres and launched an activewear line last year based on pure merino or 70% merino-30% silk blends, using yarns spun by Südwolle with organic wool from Patagonia (the place, not the company). Gabriele Kolompar, managing director, says the company worked with a university laboratory to test the "best micronage (17.5 micron), knitting construction and percentage of elastane" for sports uses. "Silk provides higher resistance to wear and elastane a longer lasting fit," she adds, hoping to take advantage of the ongoing popularity of merino wool in sportswear with the two weights now on offer, a 150 gramme base and a 200 gramme mid-layer.

COPYRIGHT

Blending up

With all the new developments in wool blends, a new term, up-blending, has come to light, most often heard at brands seeking to emphasise their premium positioning. Blending polyester with wool may have a positive effect on performance, but it is also a way to bring the price of wool-based garments down. As Dave Malsen, global partnerships manager for The New Zealand Merino Company, insists: it is important to "take wool to the next level". He sees blends as a way to further the merino story, and says: "Fifteen years into the merino trend, blends offer an opportunity to innovate at many levels: applications, constructions, performance and aesthetics."

Wool inside or outside?

In this new chapter in the evolution of wool-based activewear, the question of where to place the natural fibre in double knit constructions remains a matter of debate: next to the skin or on the outside face of the fabric?

Fabric manufacturers seem to have a preference for placing the merino wool on the back side of double knits. David Carter, innovation and R&D manager at Designer Textiles International (DTI) says that placement of the synthetic component depends on what clients ask for: "they may want more resilience on the outside and decide to place nylon or polyester on the face." His company's digital print grounds have a nylon face and merino back or can be made with an intimate blend of merino and nylon. "Intimate blends with textured nylon doubles the strength of the resulting fabric, which can be useful in lighter weights, and only a small amount, maybe 15%, of synthetic content is necessary," he says.

Polartec's PowerWool fabrics are plated and the merino placed next to the skin to pull moisture away, provide added durability and shape retention, says company CEO, Gary Smith, who is a big fan of the natural fibre, which he got to know well as president of the Timberland company, which owns SmartWool. "Merino is a short staple fibre, which may lead to durability issues as the yarn untwists. Shape retention can also be an issue, along with its slowness to dry," he says, claiming that Polartec offers the best of both worlds in either intimate blends (Power Dry and Power Grid base layers) or double face fabrics such as PowerWool and the PowerStretch Pro soft shell that has a nylon face (46%) for better abrasion resistance, plus 40% wool and 16% Spandex.

Taiwanese fabric converter Evertex also recommends placing merino next to the skin. "A filament polyester placed on the outside offers more durability and the fabric will resist backpack chaffing, says company manager Tony Yeh. "On the inside, merino provides softness, warmth, odour control and moisture management," he adds. The company is promoting a newly developed waffle-back double knit made in 57% polyester, 23% polypropylene and 20% wool. "The waffle back will speed up the transfer of moisture to the outside," says Mr Yeh. He sees placing wool on the outside as more of an aesthetic choice, for fashion uses.

Lars Ulvesund at AWI concurs, saying wool should be placed inside so that the polyester face draws humidity to the outside, which is the configuration of the Performance Merino and Sportwool platforms. However, not all performance sportswear brands share this point of view.

Swiss-based underwear maker Odlo places the synthetic yarn next to the skin. "In our plated knits, the inside is made in 100% polyester and the outside of the fabric is a blend of 80% wool and 20% polyester. This construction provides optimal moisture management, the polyester next to the skin creates a push-pull effect," claims Eva Buesel, underwear product manager at Odlo.

The need for differentiation may also explain the diverging attitudes regarding the placement of the natural fibre. The North Face combines merino wool with hollow-core polypropylene in a double knit fabric in which the synthetic is placed next to the skin to maximise the pull effect of the merino side. The VF-owned outerwear brand can thus promote its own performance story and not tread on the territory of VF-owned merino specialist SmartWool.

Polypropylene is a good match for merino wool, says Susan McGreal, global sales and marketing manager for CoolVisions, because it has "the lightest carbon footprint of all synthetics". The polypropylene producer (now owned by Indorama) has developed a dyeable fibre that doesn't restrict the colours that can be obtained and provides a number of advantages compared to pure wool. These include "zero moisture regain, faster drying, ease of care, in addition to warmth and the possibility of making lighter-weight fabrics", says Ms McGreal. She also insists the polypropylene be placed next to the skin for enhanced moisture management. US-based Global Merino is developing single and double knit fabrics in merino and CoolVision polypropylene blends.

The options continue to expand in the quest to combine the best of both worlds. Now that merino wool is firmly established in performance sportswear, the natural fibre can continue to write new chapters in an ongoing saga that encompasses the many stories that blends can spin.



Odlo's single jersey Revolution Light Fabric (80% polyester/20% merino wool) weighs 145g. The high polyester content is said to provide better moisture management for warm weather.

Odlo

COPYRIGHT