

## FOOTWEAR TECHNOLOGY: GORE-TEX SURROUND



WL Gore has announced its first major footwear development in more than a decade. It involves incorporating a new version of its membrane technology into a specific shoe construction to deliver what its says will be breathability *under* as well as *above* the foot.

# *Gore claims “all-round” breathable breakthrough*

**W**aterproof, breathable technology provider for footwear and textiles WL Gore has announced a new solution aimed specifically at making hiking footwear more breathable.

Named Surround, Gore said on introducing the new technology that it would provide breathability below as well as above the foot, giving shoes what it calls “all-round, 360-degree breathability”. It works by means of incorporating a new construction into hiking shoes or boots.

This construction consists of five components:

ventilation outlets in the side of the upper, a layer of Gore-Tex’s already established Extended Comfort membrane technology underneath the upper material, a breathable, removable insole, Surround the new form of Gore-Tex membrane underneath the insole, and finally a Surround ‘spacer’ component underneath that.

The new technology had an advance launch in a limited number of casual, open-sole footwear ranges in 2013, but, following extensive laboratory and field testing, 25 outdoor footwear brands are incorporating the technology into their spring-summer 2015 hiking footwear





collections. Many of them had their first examples of hiking shoes and boots with Surround on display at the 2014 Outdoor exhibition in Friedrichshafen in July. Brands who prepared Surround shoes and boots for Friedrichshafen included Meindl, La Sportiva, Marmot, Salewa, Chiruca and Zamberlan. Outdoor footwear, with a more complex sole construction, took longer.

### A long time coming

Gore has said Surround is the result of around seven years' discussion and research and development work and represents its most significant innovation in footwear since its launch of Extended Comfort some 12 years ago. "We take our commitment to innovation seriously," says Jürgen Kurapkat, the company's head of footwear public relations by way of an explanation as to why this project has been so long in the development. "Our research and development people work hard to prove every new idea and sometimes it takes a while. All products need to be fit for use when they come to market."

It's a component brand, of course, rather than a maker of finished product, but his company has its own, dedicated footwear research and development team, focusing not just on membrane technology, but on footwear construction too. "We care about the whole shoe," is how business leader for sports footwear, Achim Loeffler, puts it.

### Specifics on how to use it

Global product specialist for outdoor footwear, Marc Peikert, backs this up. "We deliver the laminate to the brands," he explains, "but we give specifics for the entire shoe, and brands have to fulfil that; it's not a gimmick." He explains that extending the use of membrane technology to the bottom of the foot is a good way to increase breathability because it makes between 25% and 30% of the surface of the foot more breathable than before. And he insists that "multiple field tests" have shown that this can make a big difference.

Tests took place in Europe and in North America among diverse groups, ranging from people who were working at the Oktoberfest in Munich to serious hill-walkers in Switzerland. "The people in Switzerland complained of cold feet when they got to the top of one of the mountains," Mr Peikert recalls. "That was good; it helped to prove the concept." Laboratory testing was part of the preparation for market launch, of course, with the Jožef Stefan Institute in Ljubljana, Slovenia, providing its services for the project. Tests over several hours on shoes with and

*Zamberlan is one of the brands that had hiking footwear with Surround on show at the 2014 Outdoor exhibition in Friedrichshafen.*

 Zamberlan

*There are five components to the footwear construction Gore-Tex specifies for hiking shoes with Surround.*

 La Sportiva



### New technology is aimed at 223 million hikers

At its launch of Gore-Tex Surround, WL Gore said its focus for the new technology is hiking.

"Hiking is a huge market and a very exciting one," said WL Gore's business leader for sports footwear, Achim Loeffler, at a launch event near Munich in May.

He explained that, after a series of different studies, WL Gore has calculated that there are 223 million hikers in its target markets worldwide, which excludes South America and Australia. It used what it says is a widely accepted definition of a hiker as someone who takes part in the activity at least five days per year.

"We believe that Gore-Tex Surround will offer hikers increased breathability and, as a result, drier, cooler feet," Mr Loeffler continued. "We think around 15.5 million hikers per year will be interested in shoes that offer this.

There is a common perception that people often feel too hot and too sweaty in hiking shoes."

Focus groups his company has run on the subject helped convince it the hiking market was worth pursuing. Not everyone aspires to reach the mountain peaks, Mr Loeffler continues, but just wants to have a pleasant day out with family and friends, spending some time in nature. Often, this involves waiting to see what weekend weather is like and taking a late decision, sometimes around the breakfast table, to go. "These are the consumers that we believe will be interested in Gore-Tex Surround," he says.

*Gore-Tex puts the number of hikers worldwide at 223 million.*

Red Bull Media House



without Surround technology below the foot (although otherwise the same) in a warm chamber showed a difference at the greatest point of 20% in relative skin humidity.

### Close attention

Gore said at the time of the launch of the new technology in outdoor shoes that it has decided to incorporate a second, more durable, new form of its membrane technology underneath the insole because it suspects Surround will be subject to close attention and it believes this extra step will give a greater guarantee that the idea will work well. "We are conservative," Marc Peikert says. "The Extended Comfort laminate may work under the foot, too, but because this part of the new idea is likely to attract a lot of scrutiny, so a more durable laminate, the Surround laminate, is going in there for now."

He explains that the breathable, removable insole is also part of the specification because Gore fears that a non-breathable one could compromise the performance of the technology. "But we are not going into the footbed business," he adds quickly.

*Mammut is another of the brands to have signed up early to put Surround into some of its hiking shoes for spring-summer 2015.*

Mammut

