

High-tech functional systems provider to the clothing industry Sympatex and its specialist partner Rudolf Chemie are convinced that their combined idea of offering greener water-repellent coatings for outdoor clothes is starting to make an impression on the market.

Market responds to fluorocarbon-free coatings

Specialist German chemical provider Rudolf Chemie has been convinced for quite some time that there is room in the market for a variety of water-repellent coatings for fabrics. And a coating that is biodegradable and free from any substances that could harm human health or the environment—and there are certainly question marks over man-made fluorocarbon-based compounds in connection with these issues—is something Rudolf believes it can bring to the party.

After years of research and development, it came up with the Bionic Finish product line, a range of textile finishing products that can repel water or dirt more effectively, in the context of clothing, than technologies that mimic the lotus effect.

Lotus position

Rudolf argues that, while designers have been able to mimic the lotus-effect—a reference to that flower's ability to repel rain water and dirt by virtue of forming fine nodules with a thin wax coating on the surface of its leaves—with success in applications such as wall surfaces, the apparel industry has proved to be a more difficult challenge. "The application of the lotus effect on textiles is of little use, since textiles do not have a hard, unworkable surface, and aspects such as handle and abrasion resistance play an important role," the company claims. Bionic, a solution using dendrimer chemistry (dendrimers are molecules with repeated branches) is its answer.

The fact that one of the Bionic products, Ruco-Dry, is free from fluorocarbons convinced outdoor clothing specialist technology provider Sympatex to work in partnership with Rudolf. Sympatex was already on the receiving end of demands from customers for a more environmentally friendly way of keeping water



out of their finished garments without compromising on breathability.

Testing proved that Sympatex laminates and Bionic Finish coating technology could work well together, giving results that the two technology providers have called "remarkable" owing to the high levels of resistance to water and wind that the combination gives to outdoor and sports apparel. That it does so without using fluorocarbons is an important bonus.

Swedish outdoor brand Lundhags was one of the first companies to recognise the potential of the new laminates, which the technology providers have brought to market with the name Bionic Finish Eco. It presented the prototype of its new Air 37° Jacket at the European Outdoor exhibition in Friedrichshafen last summer, making much of the sustainability credentials of the new soft-shell fabric.

Rudolf Chemie and Sympatex present a united front at the European Outdoor exhibition.

Messe Friedrichshafen

Then, earlier this year, the DLX series of snowsport clothing from Swiss brand Zimtstern was one of the winners at the inaugural ECO Responsibility Award, a new category at the ispo Awards for the ispo Winter 2009 exhibition in Munich. The panel of judges said the DLX jackets and pants demonstrated “the highest level in technology, design, and sustainability” and noted the absence of fluorocarbons.

Products in the range, including the Remington jacket and the Rustington pants, use an extremely sturdy 6.6 nylon material on the outside layer with Sympatex’s highH2Out hydrophilic membrane. The garments have a soft inner lining made from 100% recycled polyester fibre. Zimtstern is very happy with the combination, and so it should be, according to Anton Schumann.

Mr Schumann, one of the managing directors of Rudolf Chemie, insists that the green credentials of the technology is winning an enthusiastic response, not just from outdoor apparel brands, but also from retailers, the people who face the buying public. “The eco nature of this is the real added value,” he says. “We need to substitute fluorocarbons; they’re not biodegradable. Everyone knows that, and it’s something we’ve been pushing, not just in Europe, but in the US and Canada too. We’ve already had contact over this with some of the biggest brands in the industry there and we are sure more companies will follow Zimtstern, Lundhags and Hahnenkamm, another Swedish brand that brought a jacket with the finish to ispo Winter 2009. Smaller companies such as Hahnenkamm are able to move faster, but the big ones will follow because they must, and they are looking now. There is a mind-shift now because we know that we need, not just performance, but sustainability too. This is high-tech with a sustainable future.”

On the other side of the partnership, head of marketing, Robert Kröger, points out that more and more of the companies Sympatex works with have started to ask about Bionic Finish Eco, testament, he says, that sustainability is of “major importance right now”. A bonus for him is that the whole exercise has helped him improve the image of Sympatex in the industry. He explains: “The feedback we were receiving about a year-and-a-half ago was that our image didn’t really work with the ideas the brands wanted to present to the market. We had to become cooler, younger, more sporty and more fashioned-focus. Thanks to the work we’re doing with young, cool brands such as Zimtstern, we now have a younger, fresher image.” 

The Zimtstern Remington snow jacket and Rustington pants in olive from the Swiss brand’s DLX series, winner of the ECO Responsibility Award at ispo Winter 2009.

 Zimtstern

