

This year sees several big developments in outdoor clothing for the autumn so here's a sneak preview of what we can expect.

RAB'S STRETCH NEO JACKET

Lightweight Polartec NeoShell stretch waterproof fabric

- Helmet compatible hood with wired peak
- Aquaguard front zip with internal storm flap and chin guard
- 2 external Aquaguard zip pockets
- 2 internal mesh zipped pockets
- Double exit hem draw cord
- Velcro adjustable cuff tabs
- Reflective trim
- Weight: 480g/17oz



POLARTEC BREAKTHROUGH

This autumn also sees the introduction of versatile Polartec NeoShell, claimed as being 'the most breathable waterproof fabric available on the market today'. Unlike most hardshells on the market today with zero airflow, Polartec NeoShell allows actual air permeability; even a tiny amount of air permeability, imperceptible from a wind chill standpoint, accelerates moisture vapor transport significantly. While traditional shell fabrics require heat and pressure to build inside the garment before the membrane begins to work, Polartec NeoShell breathes actively thanks to an exclusive sub-micron fibre membrane with unprecedented air permeability. This new fabric yields competitive scores on traditional waterproof breathability measures like RET and MVTR. However, these outdated static tests also yield some bizarre results that are completely counter to real world observations, like hardshells are supposedly more breathable than 200 weight fleece. Polartec is encouraging the outdoor industry to use a test that more closely emulates real world experience in the Dynamic Moisture Permeation Cell (ASTM 2298). This is a test actively used by the United States Military to evaluate fabrics because it more closely predicts actual user experience. Polartec NeoShell will be available in a range of combinations including super lightweight flat tricot backed styles to luxurious high loft backs with extremely durable woven face fabrics. Most versions offer excellent stretch, so much so some apparel brands will advertise Polartec NeoShell as a 'waterproof soft shell' while others place the fabric squarely in their 'hardshell' collections. This new hydrophobic, microporous polyurethane membrane offers the best of both worlds.



Running through problems and solutions in Active Shell development in one of Gore's testing labs



On the trail with Gore's new Active Shell

NEW GORE-TEX LAMINATE

'The most breathable Gore-Tex ever' is the message about the new lightweight 3 layer Active Shell laminate which will be available from this autumn. For the past eighteen months, 12 of Gore's manufacturing customers have been trialling what Gore describes as 'this new class of waterproof and windproof garment delivering extreme breathability and excellent next-to-skin comfort for all year round outdoor use.'

Gore's Martin Lankes, said,

"We have clear guidelines on Active Shell garment design and manufacture which aim to maintain the excellent performance characteristics. For example, the maximum weight we'll aim for in an Active Shell Training Shell jacket is just 280 grams. All-weather fast moving outdoor athletes such as trail runners, mountain bikers and speed climbers can now complete their done-in-a-day activities in lightweight garments with advanced moisture management without compromising on durable waterproof protection. With our Gore-Tex Active Shell laminate technology we have succeeded in bridging the gap between extreme breathability, lighter weight and optimum weatherproof protection. This is the first totally waterproof garment that really does feel comfortable next to your skin during highly aerobic uphill activities."

HEAT ON DEMAND

Columbia Sportswear's Autumn 2011 product developments include form fitting, four way stretch baselayers with Omni-Heat Thermal Reflective silver dot thermo-regulator lining and Omni-Wick technology alongside heat on demand electric powered thermal technology in Omni-Heat Electric for apparel, footwear and accessories. At the push of a button, adjustable comfort can be delivered directly to where it's needed. State of the art carbon-based heaters powered by lightweight, low-profile rechargeable batteries can keep wearers warm for hours.

BASELAYER MIDWEIGHT 1/2 ZIP



Accessible, neatly packaged and a high performer, the silver dots of the Omni-Heat Thermal Reflective lining ensure that naturally generated body heat is reflected and retained; Omni-Wick wicking technology whisks sweat away.

CIRCUIT BREAKER SOFTSHELL



Low profile and lightweight, this softshell features Omni-Heat Electric technology combined with the silver dots of the Omni-Heat Thermal Reflective lining, Omni-Heat Insulation, a soft synthetic fill which feels like down, and fully seam sealed, waterproof/breathable Omni-Tech fabric.

BUGAGLOVE MAX ELECTRIC



This glove offers three levels of Omni-Heat warmth at the push of a button. OutDry waterproof technology keeps rain and snow out while the Thermal Reflective lining retains natural warmth, dissipating sweat and excess heat to provide lightweight thermo-regulation. ■