



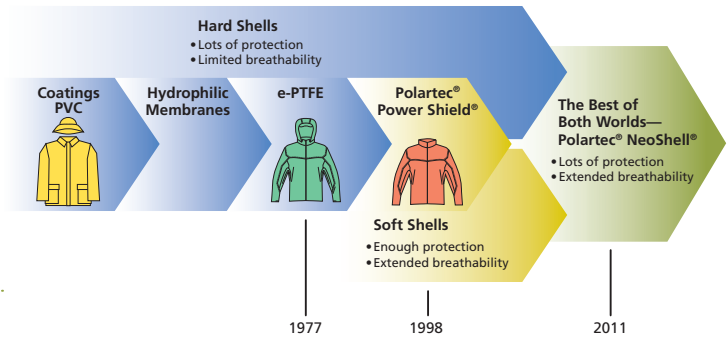
# SHELTER MADE POSSIBLE

## Polartec® NeoShell®

Introducing the latest innovation in weather protection fabrics, Polartec® NeoShell®. Polartec® NeoShell® is the first fabric to combine the superior breathability, ventilation, and stretch of a soft shell with the waterproof performance of a hard shell, delivering the best of both worlds. Combining protection from wet weather and unprecedented breathability through dynamic air exchange, Polartec® NeoShell® dramatically improves the environment inside the garment. Athletes will be drier inside in a wider range of weather conditions and exertion levels than ever before. Polartec® NeoShell®. Dry inside and out. Join the revolution.

*Ideal Uses:* Polartec® NeoShell® fabrics are ideal for skiing, snowboarding, ice climbing, hiking, fishing, or any activity where inclement weather could be encountered. They are used in jackets, pants, hats and gloves to provide shelter, keeping the wearer dry and comfortable.

### Polartec® NeoShell® Evolution of Shell Gear

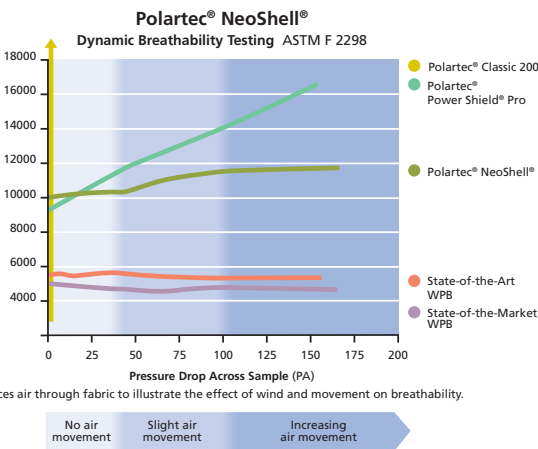


### How does it work?

Polartec® NeoShell® features a proprietary, patented construction process creating a new hydrophobic, microporous, polyurethane membrane with a tightly controlled range of pore sizes. It has the durability and stretch of a polyurethane film plus the breathability of a microporous structure. This unique construction allows positive air exchange to drive moisture vapor release while remaining completely waterproof. It does all this at a fraction of the weight of current membrane technologies, so a garment made of Polartec® NeoShell® is lighter, softer and more supple than the competition. Both lab and field tests indicate this fabric will be a "game changer" for performance outerwear.

### Breathability that beats the pants (and jackets) off the competition.

**Dynamic Breathability:** Breathability refers to the ability of a fabric to allow movement of body moisture vapor through it; the process is called diffusion. Breathability can be increased by air movement through or around the fabric; that process is called convection. The best way to measure breathability in a lab is with a machine that can imitate both those real world conditions. We call it dynamic breathability testing and use the ASTM F2298 standard DMPC (Dynamic Moisture Permeation Cell).



In this test, Water Vapor Flux measures moisture vapor transmission through a fabric in g/m<sup>2</sup>/24hours. Higher numbers mean a fabric is more breathable. Polartec® NeoShell® is 100% more breathable than the best waterproof breathable shells in the market in dynamic or active conditions. Your movement or a light outside wind create the dynamic conditions necessary to deliver superior breathability. Additionally, there is no perceived loss of warmth or windchill involved with this effect. Polartec® NeoShell® fabrics are air permeable to .5 cfm (ave.) which is insensible to the wearer.

### Technical Highlights

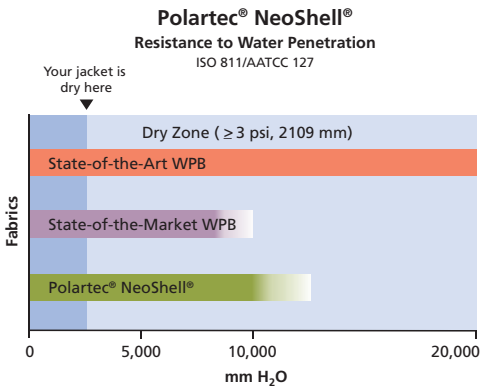
Polartec® NeoShell® falls in the sweet spot between traditional soft shells and hard shells delivering the best of both worlds:

- Waterproof: 10,000+ mm (5000+ mm after 20 wash/dry cycles or 24 hour wash)
- Active air exchange: (.5cfm or 2 l/m<sup>2</sup>/sec-ISO 9237) significantly enhances breathability
- Virtually windproof: blocks 99.9% of the wind
- Durable water repellency
- Good stretch & recovery for active comfort
- Quiet and drapable
- Lofted backs or traditional tricot / mesh backs for a full range of insulation needs



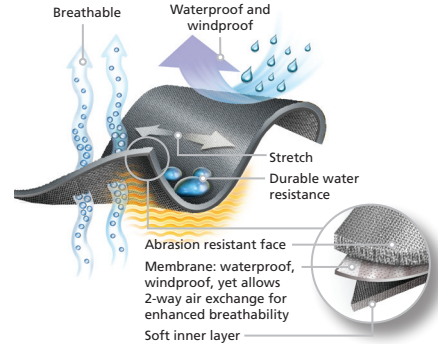
**Static Breathability:** Polartec® NeoShell® meets or exceeds best in class performance for waterproof breathables with RET and MVTR vapor transfer tests (ISO11092, ASTM E96, JIS1099)

**Waterproof:** It is currently accepted in the WPB market that 10,000mm (ISO 811/AATCC 127) is waterproof. Yet some companies like to quote a number that is 1.5 or 2 times higher. It seems a curious claim, because if everyone knows you are dry at 10,000mm, you don't get drier at 20,000mm. Dry is dry. There is no such thing as twice as dry. In fact in any garment, you're only as dry as its seams. All leading shell brands consider 3 psi (2100mm) of water resistance at a garment's seams to be adequate to guaranty waterproofness. Seams are generally considered the weakest link in a waterproof breathable garment.



**Polartec® NeoShell®**

- Waterproof
- Highly breathable two-way air exchange
- Blocks 99.9% of the wind
- Stretch for active comfort
- Warmth without weight
- Less noise than a hardshell
- Machine washable



**Hang Tags**

Garment and Accessory tags are available with this fabric.



PNEO-10



PNEOACC-10

**Technologies**

Technology hang tags are available with this fabric.



NEOTEC-10

**Woven labels**

Woven labels are available with this fabric.



PLPNEOS-10



PLPNEOV-10

**Heat Transfer Labels**

Clear background, red peaks, and either black or white lettering.



PHTB-10 (BLACK)



PHTW-10 (WHITE)