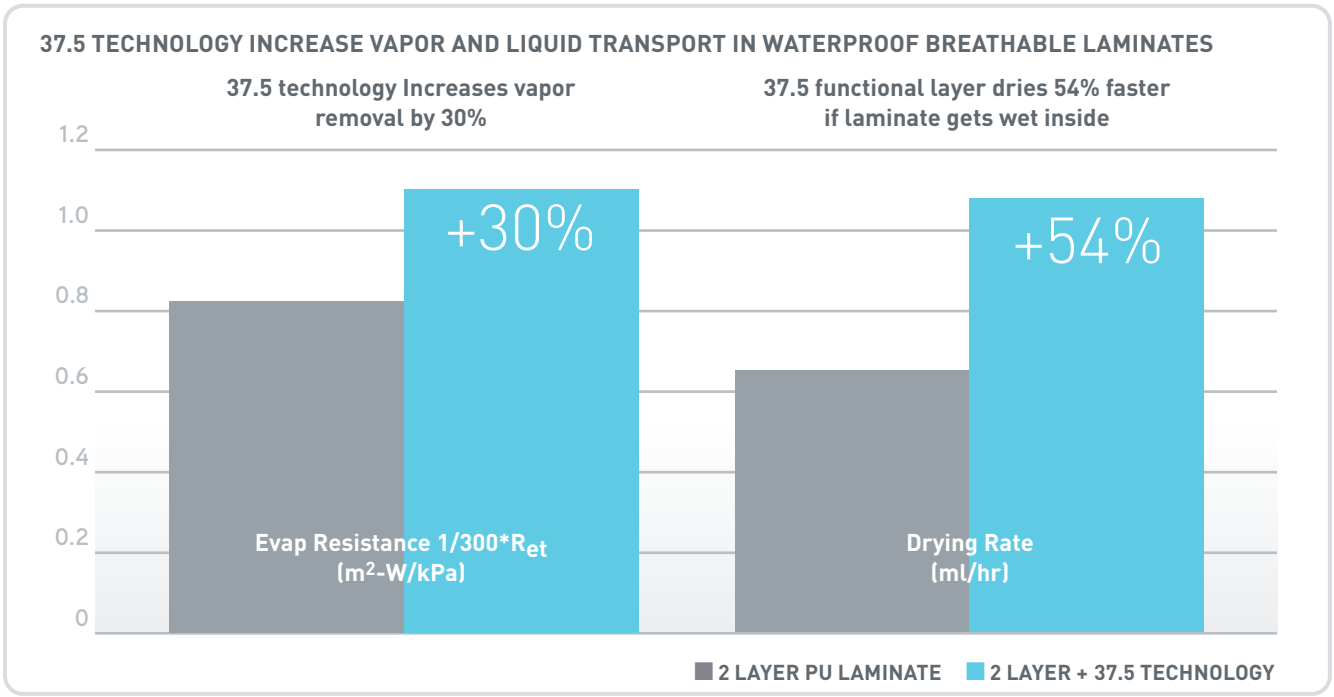
37.5™ Technology Laminates

PATENTED TECHNOLOGY THAT USES BODY HEAT TO EVAPORATE MOISTURE

The active particles in 37.5™ technology enhance the performance of waterproof breathable fabrics by accelerating both vapor diffusion and liquid evaporation. This technology actively works with your body to keep you dry and comfortable.

TECHNOLOGY THAT ENHANCES THE BODY'S EFFICIENT SYSTEM

Your body already has the ultimate thermo-regulating system: skin. The perspiration vapor that comes off of skin during activity cools the body when working hard. In fact, each gram of evaporated sweat releases 580 calories of stored heat. A key to comfort is removing moisture from your clothing layers. Unless this water vapor can be removed it builds up in clothing and creates a clammy microclimate next to skin. 37.5™ technology works to enhance the body's natural thermo-regulating system to keep you comfortable.



MORE THAN JUST MVT: The AATCC 201 test method begins to measure the movement of moisture at very low humidity levels using real life sweating rates. All other MVT tests are conducted using extreme sweating rates at humidity levels where you are already uncomfortable.

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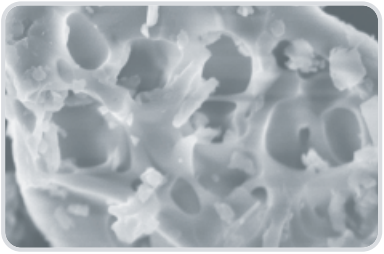
HOW IT WORKS

The active particles in patented 37.5 technology can be printed on the inside of any laminate to enhance the comfort and performance of waterproof/breathable (W/B) garments. Traditional laminates rely on a large water vapor concentration difference across the membrane as the main mechanism to create diffusion and drive excess moisture from your microclimate out through the clothing.

This requires a buildup of humidity within the microclimate. Typically, water vapor doesn't start moving through W/B fabrics until the relative humidity in the microclimate next to your skin reaches about 70% relative humidity.[1] At that point you are already uncomfortable, as the optimum relative humidity in your microclimate is around 35%-40%. 37.5 technology adds a unique mechanism to increase the driving force and remove water vapor before it builds up. The active particles in 37.5 technology are desiccant materials that work with your body to attract moisture vapor, capture your Infra-red (IR) energy and add surface area to the membrane. The combination of these physical properties increases water vapor diffusion and accelerates evaporation, thereby reducing internal vapor concentration and condensation. The result is a much more comfortable user experience.



The desiccant nature of highly porous 37.5 active particles attracts moisture vapor. These particles release the water vapor by capturing your IR energy. This reoccurring capture and release mechanism pumps water vapor out of the garment system, enhancing the user experience. An 800% increase in surface area improves fabric drying times by 30 to 100%.

FEATURES OF 37.5 LAMINATES

- Proprietary sharkskin print pattern optimized for W/B performance and print quality
- 37.5 technology available on a wide range of membranes, including: hydrophilic polyurethane, microporous polyurethane, polyester and e-PTFE
- 37.5 technology can be printed on two and three layer laminates to produce 2.5 and 3.5 constructions
- Knit and woven laminate constructions available, including stretch laminates
- Regardless of the membrane or construction chosen, minimum laminate performance requirements for MVT, waterproofness, water-repellency and durability are assured by certified suppliers

BENEFITS OF 37.5 TECHNOLOGY

- 37.5 technology improves moisture vapor transmission (MVT) and drying time by 30 to 100%. This helps your body more efficiently maintain an ideal core temperature, enabling you to perform better, longer
- 37.5 technology reduces condensation formation
- 37.5 technology print adds durability and feels better next-to-skin, eliminating the need and unnecessary cost of a separate liner
- 37.5 technology is the most cost effective way to improve the performance of any W/B laminate
- 37.5 technology is made with naturally derived materials
- 37.5 technology gives PU laminates a drier touch while accelerating vapor transport and eliminating the plastic/sticky feel

References

[1]Comparison of Sweating Guarded Hot Plate and Upright Cup Methods of Measuring Water Vapor Permeability, Phillip W Gibson, 1992
Waterproof Breathable Fabric Technologies: A Comprehensive Primer and State of the Market Technology Review, Alan Dixon, 2004