

## The World's First

Textile-based electro-osmotic moisture transfer system using Textile Computing™ technology by Myant.

With minimal power consumption, and flow rates matching and exceeding human sweat rates completely independent of weather conditions, Skiin Osmotex Self-Drying Textiles are revolutionizing moisture management.



## Skiin Osmotex Self-Drying Textiles



### Stay Dry and Comfortable

Active moisture removal keeps garments dry to the touch, eliminating discomfort and irritation caused by sweat.



### Enhance Physical Performance

Regulate body temperature and reduce heart rate during exertion, improving endurance and focus.



### Ensure Safety

Prevent risks of hypo-/hyperthermia and skin issues caused by moisture buildup, even in extreme or high-pressure conditions.



### Other (Medical)

Expanding possibilities for healthcare solutions including improvements in wound management, drug delivery and other medical applications requiring precision fluid control.



# What Is It?

The Skiin Osmotex Self-Drying Textile is an electronically driven textile pump that uses Textile Computing™ technology. It can be actively controlled to move liquid and vapor through a membrane and does not rely on differences in humidity to perform.

# Specifications

Property	Active	Passive Membranes
Liquid Flow*	> 2 L m <sup>-2</sup> h <sup>-1</sup>	0 L m <sup>-2</sup> h <sup>-1</sup>
Soaked-To-Dry Time**	< 20 mins	Several Hours
Energy Consumption***	1-10 Wh L <sup>-1</sup>	N/A
Transport type	Liquid, Vapor	Vapor
Wash Fastness	Washable	Washable
Electric Voltage	0.5 V	N/A
Electric Current	MILLI AMPS	N/A

\*Ability to evacuate condensation, sweat, heavy rain, at high relative humidities (100%).

\*\*Expected based on simulated active (moving, running, jumping) user conditions.

\*\*\*Compared with 672 Wh L<sup>-1</sup> for evaporation at 40 8C.

\*\*\*\*When applied in a jacket.

# Key Features

## Active Moisture Control

Actively pumps sweat and liquid directly away from the body, even under saturated or humid conditions, unlike passive membranes that fail in high humidity, rain, or wet environments.

- **From 2.5 to 50 times the water transport rate** of other leading waterproof breathable membranes (and much greater under wet and high relative humidity (RH) conditions).
- **Excellent passive vapor transport** that is enhanced by liquid transport capability.

## Soaked-to-Dry

Achieves complete dryness a few minutes after activation, providing a fresh and comfortable experience during activities or after wear.

## Eco-Friendly and Safe

Is free from PFAS and harmful chemicals, offering a sustainable and health-conscious solution.

## Customizable and Versatile

Integrates seamlessly into jackets, vests, and other textiles, adaptable for various applications and lifestyles.

## Power Efficiency

Operates on just 0.5 volts, ensuring lightweight, long-lasting performance for outdoor or professional use.

# Integration

Skiin Osmotex Self-Drying Textile panels at any size and shape can be installed into a wide range of textile form factors through traditional cut and sew operations. Each panel comes pre-assembled with built-in electronics that can be controlled with your phone via Bluetooth.

A midlayer vest/jacket is shown as an example form factor that is to be worn underneath a jacket shell (outer layer).

# Advantage

## Beyond Passive Solutions

Active membranes outperform traditional passive technologies, excelling in challenging conditions such as high relative humidity (RH) or rain, or at high activity levels and sweat rates.

## Reliable in Saturated Conditions

Continues to work even when inner layers are wet (e.g., high sweat scenarios or wet climates), ensuring consistent performance.

## Personalized Control

Electronically adjust to suit individual needs, enabling versatile use across different activities.