



TransDRY™





## WHAT CONSUMERS ARE SAYING<sup>1,2</sup>:

- 57%** PREFER COTTON-RICH ACTIVEWEAR
- 60%** SEEK OUT MOISTURE MANAGEMENT FEATURES IN ACTIVEWEAR
- 61%** DESCRIBE COTTON ACTIVEWEAR AS BREATHABLE
- 45%** WILLING TO PURCHASE COTTON ACTIVEWEAR THAT WICKS MOISTURE AND DRIES FASTER





# ENGINEERED TO PERFORM.

## WHAT IS TRANS DRY<sup>®</sup> TECHNOLOGY?

TransDRY<sup>®</sup> technology for cotton is a patented, high-performance moisture management application that allows fabrics to wick and spread perspiration as well as, or better than, most high-tech synthetic fabrics. You get the comfort and softness of your favorite cotton t-shirt along with wicking and fast-drying performance.

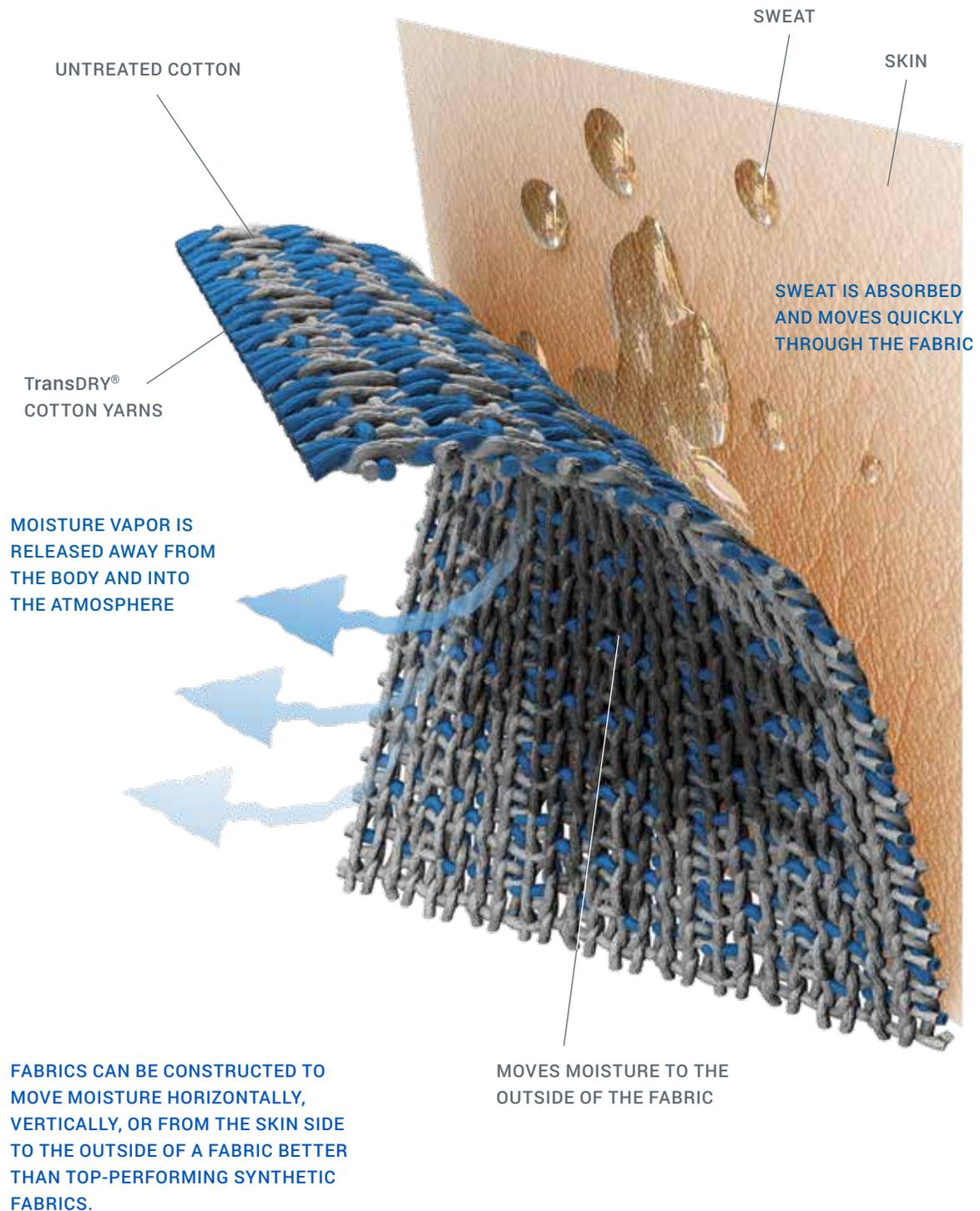
Cotton yarns are treated with a special process to make them water-repellent. The repellent yarns are blended with the right amount of absorbent cotton yarns to create channels for the movement of moisture. As a result, TransDRY<sup>®</sup> fabrics do not become over-saturated during exercise and have a lower overall absorbent capacity that mimics that of polyester and nylon.

Since the TransDRY<sup>®</sup> technology starts at the yarn stage, the possibilities to engineer moisture management fabrics are endless. The technology provides effective moisture management performance in a variety of product categories. What's more, the superior performance gets better throughout the life of the garment.

- BOTTOMWEIGHT FABRICS
- DENIM
- HOME TEXTILES
- SEAMLESS AND CIRCULAR KNITS
- SOCKS
- SWEATERS
- WOVEN SHIRTING

# MOVEMENT OF MOISTURE WITH TRANSDRY® TECHNOLOGY

## EXAMPLE: PONTE DI ROMA COTTON FABRIC



## SINGLE KNITS – SPREAD DISTANCE AND SPEED

### **TransDRY® Cotton**

30 MM, 6.35 MM/SEC

### **Polyester**

25 MM, 5.48 MM/SEC

### **Untreated Cotton**

20 MM, 3.20 MM/SEC

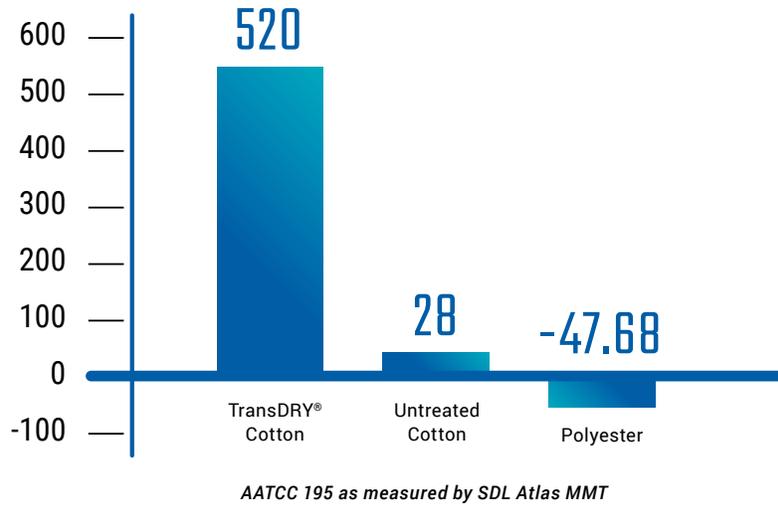
AATCC 195 as measured by SDL Atlas MMT

## TRANSFERS MOISTURE. DRIES FASTER.

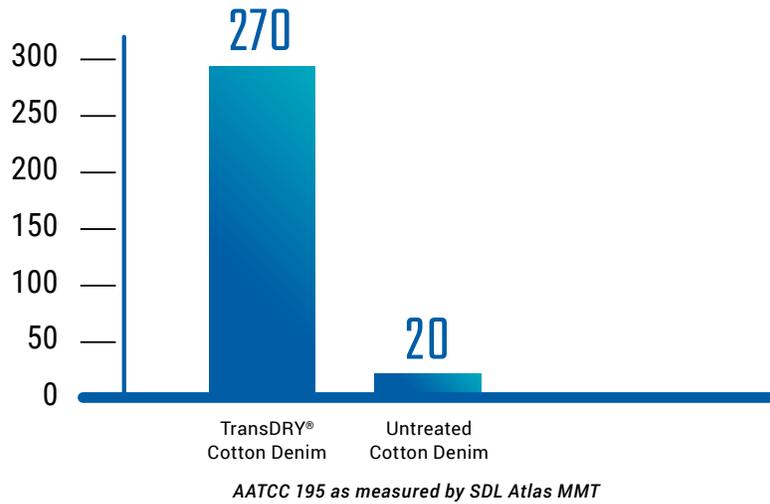
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Many synthetic fabrics become over-saturated and retain moisture next to the skin, causing a wet, clammy sensation during exercise. TransDRY® fabrics can be constructed to move moisture from the inside of the garment to the outside, in both horizontal and vertical directions depending on fabric construction. This movement of moisture can be quantified using industry standardized test methods.

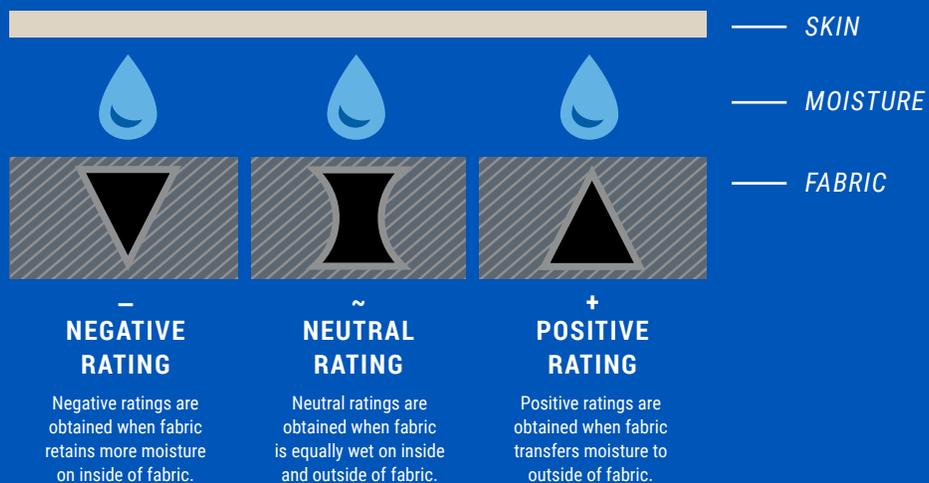
DOUBLE KNITS - ACCUMULATIVE ONE-WAY MOISTURE TRANSPORT INDEX



DENIM - ACCUMULATIVE ONE-WAY MOISTURE TRANSPORT INDEX



MEASURING THE MOVEMENT OF MOISTURE - AATCC 195





## STAY COOL. NO SWEAT.

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Traditional cotton fabrics absorb moisture rapidly and can quickly become saturated retaining as much as 20-40% more moisture than synthetic fabrics. However, cotton fabrics treated with TransDRY® technology redefine what we normally think about cotton fabrics becoming so wet. Cotton actually can dry faster than or as fast as competitors in the market – by absorbing less moisture and spreading it at a faster rate, allowing it to evaporate quickly.

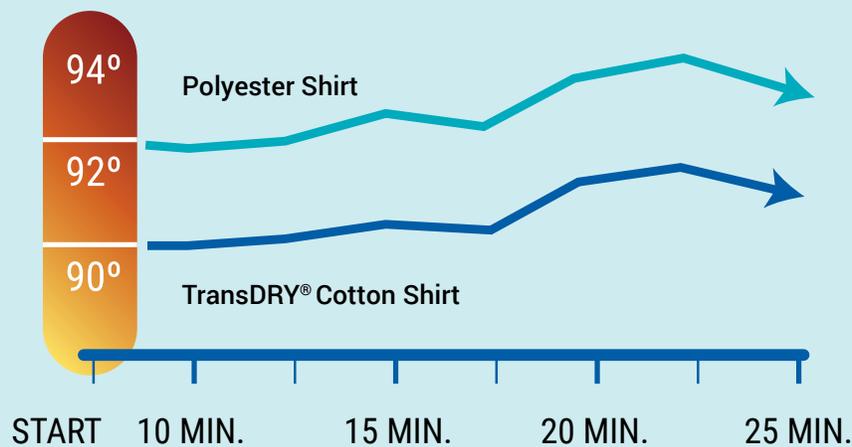
**DRIES FASTER THAN  
UNTREATED COTTON AND  
EQUIVALENT TO SYNTHETICS**



## DRY TIME EXPLAINED

- The unique construction of absorbent and repellent yarns in TransDRY® fabrics reduces the overall absorbent capacity of the fabric.
- Channels are created that allow for greater movement and spread of moisture. The spread over a larger surface area allows for quicker evaporation.
- The quicker evaporation of sweat, coupled with the natural breathability of cotton, does two things. It keeps the wearer cooler and it keeps the wearer drier.
- The TransDRY® technology allows fabrics to dry faster. Because TransDRY® is flexible across many product categories, dry time may vary based on formulation, fabric construction and finishing process. But don't worry, it's durable throughout the lifetime of the garment.

## BODY TEMPERATURE COMPARISON



*Controlled wear test study by Central Michigan University*

TransDRY® TECHNOLOGY KEEPS YOU UP TO 2 DEGREES COOLER.



## ENHANCED PROTECTION.

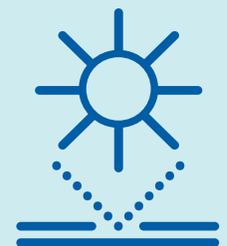
Now you can take moisture management one step further. TransDRY® technology can be combined with other chemical and mechanical technologies to achieve the ultimate active garment for all climates and sports.

### ANTIMICROBIAL

Sweat is odorless, but combined with textiles it creates an environment for odor-causing bacteria to grow. While research shows cotton washes clean from odors compared to synthetics, TransDRY® technology is compatible with antimicrobial technologies for an extra layer of protection. Applied at various stages, these products include yarns embedded with or topical treatments of recycled silver salts and topical treatments that combine silver, copper and zinc.

### UV BLOCKER

TransDRY® fabrics treated with a UV blocker perform similar to sunscreen, protecting from harmful Ultraviolet (UV) rays and prevent long-term damage from too much exposure. The UV blocker technology is applied at the fabric stage and can be combined with the dye step. The technology has been proven to last through multiple home launderings. Combined with TransDRY® technology, wearers can enjoy the comfort of wicking properties and protection from the sun.



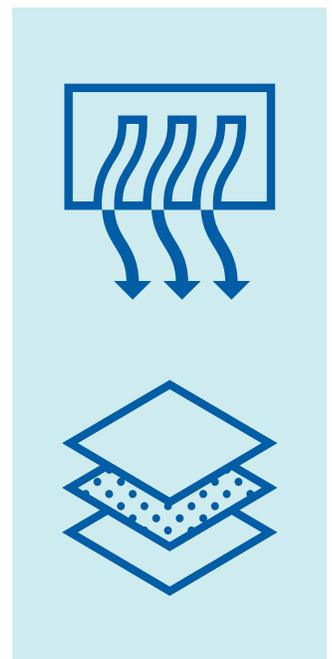


## VENTILATING

TransDRY® technology is designed to keep you cool. But if you like a little more breeze, cotton fabrics can also be engineered to offer ventilation. TransDRY® knit fabrics can be constructed using dissolvable yarns or through fabric construction by intentionally skipping stitches to create ventilating pockets in the fabric. TransDRY® woven fabrics can be designed to ventilate through open weave structures, such as a Leno weave. Lasering technology is also an option to achieve ventilation.

## INSULATING

In many outdoor conditions, athletes need warmth and protection from the elements with moisture wicking performance. Cotton fabrics, such as a single knit jacquard blister, can be uniquely engineered to increase loft and trap air, significantly improving the overall insulating capacity of cotton. Coupled with TransDRY® technology, these cotton fabrics offer a warm and dry microclimate to enhance performance.





# NATURAL PERFORMANCE.

## CONFIDENCE IN COTTON.

Performance is only one aspect to consider when making fiber decisions for activewear products. The impact on the environment is important too.

Cotton is a natural fiber produced directly from a plant by Mother Nature herself, not from a barrel of oil like other competitors in the market.<sup>4</sup> The natural cotton fiber biodegrades in soil and wastewater at a much faster rate than polyester and is considered the safest choice for the environment.<sup>1,5</sup> The real challenge is microplastic pollution on the environment especially rivers, lakes and oceans.<sup>6</sup>

Choosing the right performance fiber for your activewear lets your consumer focus on the beauty surrounding them, not what they are wearing on the trail.

## CLEAN CHEMISTRY.

It is common for moisture management chemistries and finishes to contain fluorinated compounds in order to repel moisture. The finish formulas often contain perfluorooctanoic acid, or PFOA. Issues surrounding PFOA have been investigated by the U.S. Environmental Protection Agency (EPA).<sup>7</sup> Standard perfluorinated molecules contain 8-carbon chain structures (C8) that do not break down quickly in the environment and there has been an industry-wide effort to find alternatives.

TransDRY<sup>®</sup> technology provides two options: a C6 finish that contains a shorter carbon chain structure and fluorocarbon-free finish. Performance is not sacrificed with these two alternatives - moisture management testing standards are still able to be met while providing a more environmentally-friendly solution.

74% OF CONSUMERS SAY COTTON ACTIVEWEAR IS MOST SUSTAINABLE, COMPARED TO ONLY 13% WHO SAY THE SAME FOR POLYESTER AND NYLON ACTIVEWEAR.

COTTON DEGRADES 99% MORE THAN RECYCLED POLYESTER AFTER 84 DAYS IN A COMPOST ENVIRONMENT.<sup>5</sup>

COTTON DEGRADES 95% MORE THAN POLYESTER AFTER 250 DAYS IN WASTEWATER.<sup>6</sup>

TransDRY<sup>®</sup> COTTON IS 97% BIOBASED CERTIFIED BY THE USDA BIOPREFERRED<sup>®</sup> PROGRAM.





MEXICO CITY, MEXICO

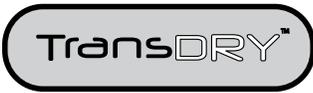
CARY, NC

NEW YORK, NY

## GLOBAL AVAILABILITY.

### WE CAN ENGINEER A SOLUTION FOR YOU.

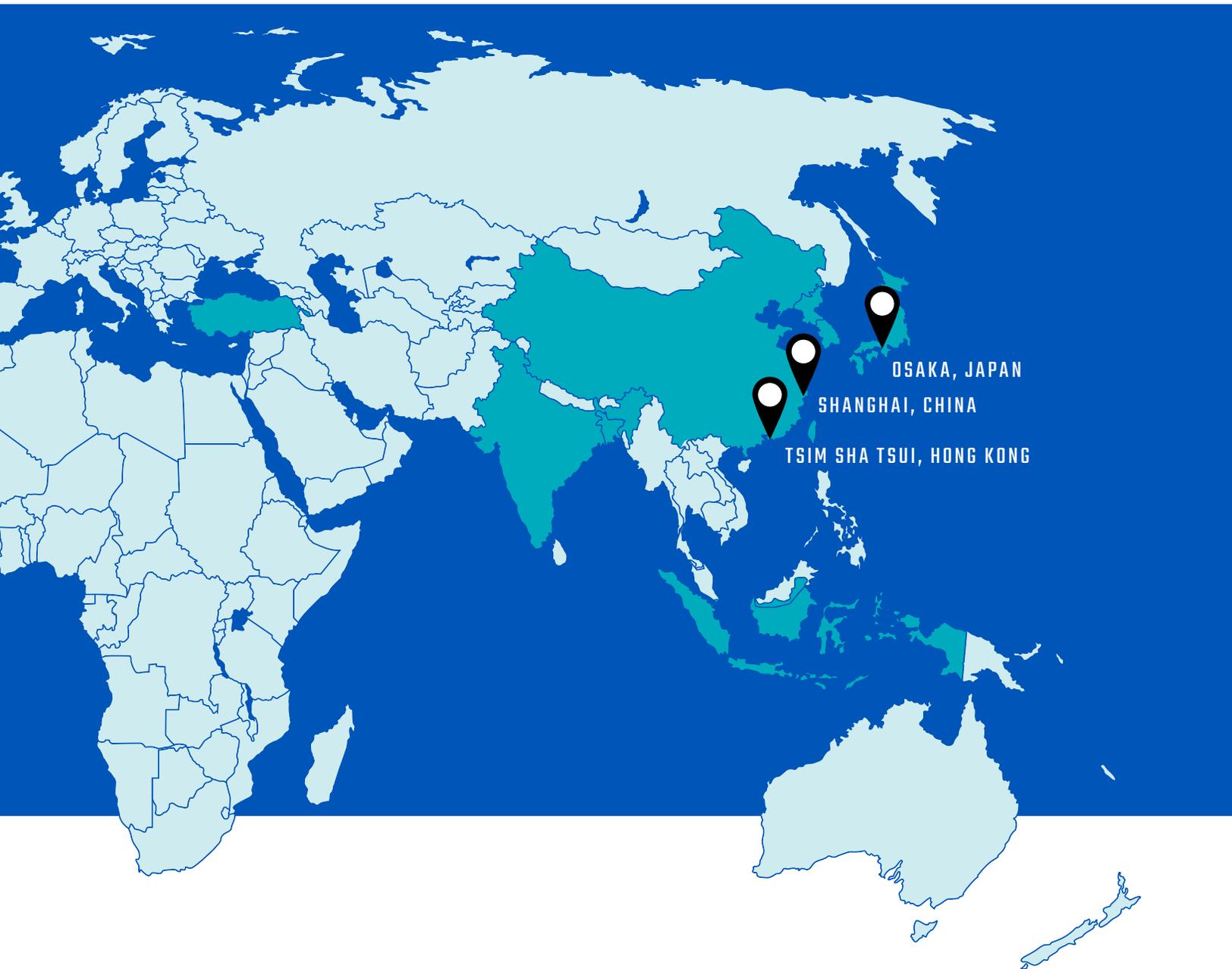
TransDRY® is a patented technology for cotton owned by Cotton Incorporated. We work with suppliers around the world to implement the technology within existing supply chains and we make it easy for brands and retailers to use the technology on cotton products.



TransDRY®

Marketing Resources Available for Use and Inspiration:

- Hangtags and other point-of-sale collateral
- Knit and woven fabric developments
- Licensed technology logo on products that meet fabric performance criteria



OSAKA, JAPAN  
SHANGHAI, CHINA  
TSIM SHA TSUI, HONG KONG

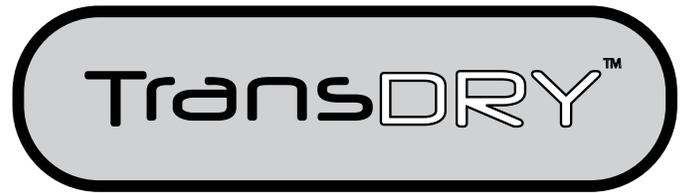
**TransDRY® Technology Suppliers Available In:**

- Bangladesh
- Canada
- China
- Colombia
- Dominican Republic
- Guatemala
- Hong Kong
- India
- Indonesia
- Japan
- Mexico
- Peru
- Portugal
- Singapore
- South Korea
- Taiwan
- Turkey
- USA



**Cotton Incorporated Global Offices:**

- New York, NY, USA
- Cary, NC, USA
- Mexico City, Mexico
- Osaka, Japan
- Shanghai, China
- Tsim Sha Tsui, Hong Kong



To feature the TransDRY® technology and logo on your products, contact your Cotton Incorporated account representative.

Learn more at [cottonworks.com](http://cottonworks.com)

Cary

New York

Hong Kong

Shanghai

Osaka

Mexico City



Cotton  
Incorporated

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Source: <sup>1</sup> Cotton Incorporated's Lifestyle Monitor™ Survey; <sup>2</sup> CCI & Cotton Incorporated 2016 Activewear Study; <sup>3</sup> McQueen, Dr. Rachel et al. The Retention and Build-up of Body Odor in Cotton Fabrics: A Field Trial. U of Alberta, 2012.; <sup>4</sup> ASTM 06400 (2010), WSP 513.1, WSP 514.1; <sup>5</sup> Li, Lili; Frey, Margaret; Browning, Kristie. Biodegradability Study on Cotton and Polyester Fabrics. Cornell University, October 2008 -September 2009. <sup>6</sup>Accumulation of Microplastic on Shorelines Worldwide: Sources and Sinks. Mark Anthony Browne, et al. Environmental Science & Technology 2011 45 (21), 9175-9179. DOI: 10.1021/es201811s. <sup>7</sup>EPA Website: <https://www.epa.gov/pfas/basic-information-about-and-polyfluoroalkyl-substances-pfass#tab-1>