



# COTTON DURABILITY



# A TRUE GAME CHANGER

Cotton is famous for both comfort and durability. Now, that double delight is even better. Knit and woven cotton fabrics can be engineered to protect you on the trail, playground and workplace without sacrificing quality.

Combined with other performance finishes for cotton such as TransDRY® moisture wicking and STORM COTTON™ water repellent technologies, these durable technologies can deliver the ultimate performance cotton garment.

▶▶ *The durability game is changing. And cotton is leading the charge.*

**46%** of consumers describe cotton activewear as durable, compared to polyester (27%) and nylon (26%).<sup>1</sup>







## Now, cotton is taking durability to a whole new level.

There are several ways to achieve improved durability for even the toughest challenges – from functional finishing to blended fabrications. In addition to Cotton Incorporated’s own TOUGH COTTON™ technology, we have collaborated with several fiber manufacturers to design fabrics with improved abrasion resistance and improved tensile and tear strength (in other words: improved protection from rips, tears and holes).

**CORDURA**  
BRAND  
F A B R I C

With  
**Dyneema**®

**CONE DENIM**®

*“Quality” can have different meanings to consumers.*

*58% believe that “good quality” means durable or long-lasting, 23% believe it means good or strong fibers and materials, and 12% believe it means the garment was made well.<sup>2</sup>*

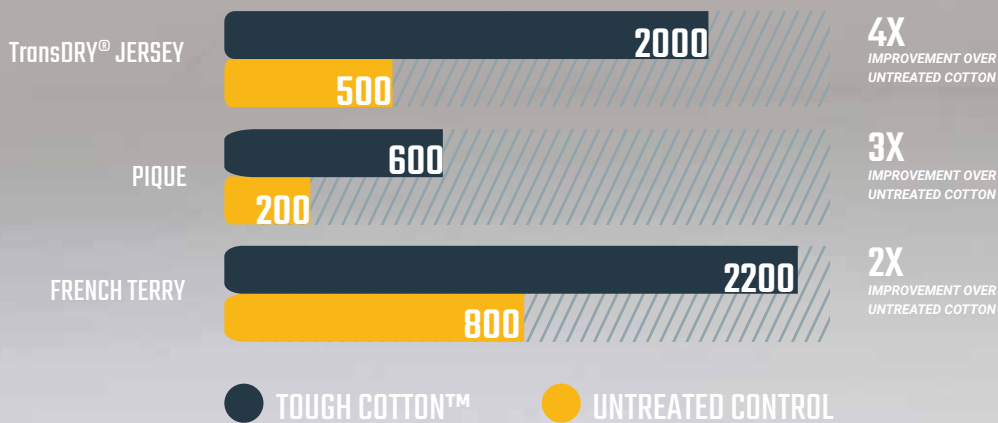
# GET TOUGH WITHOUT THE ROUGH



Everyday use and home laundering are no match for Cotton Incorporated's TOUGH COTTON™ technology. Knit and woven fabrics treated with TOUGH COTTON™ technology offer enhanced durability – a unique combination of abrasion resistance, strength and colorfastness.

Applied in garment or fabric form, TOUGH COTTON™ technology uses a proprietary finish to achieve strength and durability while improving fabric hand and sewability. TOUGH COTTON™ technology protects throughout the life of the garment with very little degradation to the fabric. So go ahead, get tough. Cotton isn't afraid of a little wear and tear.

## Martindale Abrasion for Knits



ASTM D4966 – Average Number of Cycles to Break - 20 HLTD



### Stoll Flex Abrasion for Wovens



ASTM D3885 - Number of Cycles - 8.0 oz/yd<sup>2</sup> Twill

up to **8X** better abrasion resistance for wovens

up to **4X** better abrasion resistance for knits

up to **56%** improvement in tear strength\*

\*wovens, warp and fill directions



# COTTON MEETS CORDURA®

INVISTA's CORDURA® branded fabrics can be constructed with cotton to create a comfortable cotton-rich fabric with additional strength and durability that is suitable for all your active, outdoor and workwear needs. The combination of cotton and nylon provides resistance to abrasion and minimizes wear and tear.

CORDURA® branded fabrics can be cotton-rich to create a wide range of knit and woven fabric weights - from ultra-lightweight to heavyweight. These fabrics are available in many different constructions and textures, designed to make strong, long lasting products for all adventures while maintaining the comfort of cotton.





Tear strength can **improve over 50%** with the Cotton CORDURA blend.

**Tear Strength for Wovens**



ASTM D1424 - Tear Strength (lbs.), 8.5 oz. /yd<sup>2</sup> twill

Cotton CORDURA fabrics can be over **3x stronger** than cotton alone.

**Stoll Flex Abrasion for Denim**



ASTM D3885 - Number of Cycles, 12.9 oz. /yd<sup>2</sup> denim

Up to **4 times better** abrasion resistance than cotton alone.

**Martindale Abrasion for Knits**



ASTM D4966\* Modified - Average Number of Cycles, Trizact, to Break, 10.3 - 11.6 oz. /yd<sup>2</sup> French Terry

# STOP RIPS AND TEARS: THE WORLD'S STRONGEST FIBER\*



Dyneema® is a high strength, low density polyethylene substrate that is used to increase durability and strength for fabrics and materials. Created by DSM, Dyneema® offers a new level of tensile and tear strength for woven fabrics, reducing fabric rips, snags and punch-throughs.

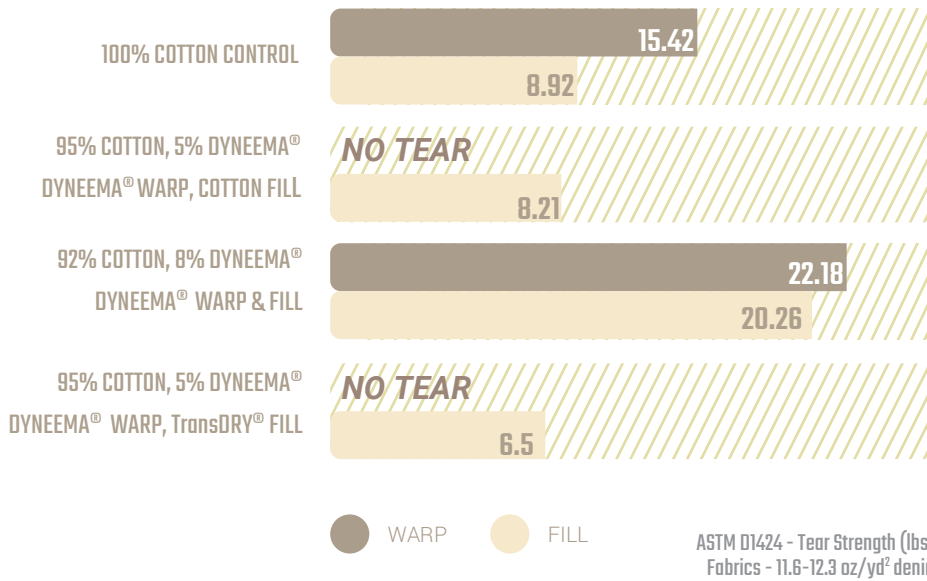
Traditionally used in other industrial applications, Dyneema® fiber is intimately blended with cotton to create a high-cotton content yarn to maintain comfort and softness while improving strength of the overall fabric. The blended yarn can be placed in the warp or fill of a woven fabric, or both for an extra level of protection.



Fabric collection manufactured  
by Cone Denim.

\*Claimed by DSM

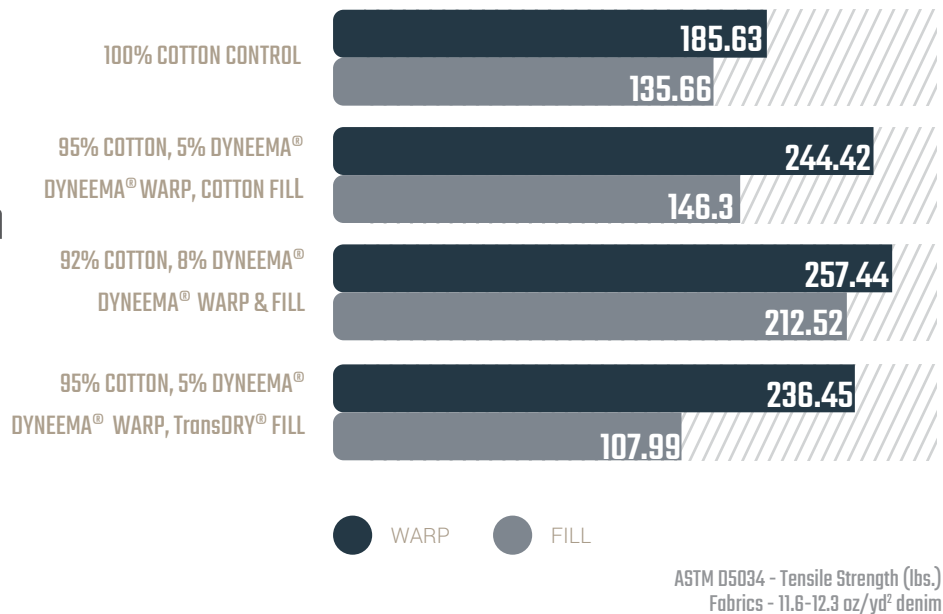
### Tear Strength



Dyneema® fabrics blended with cotton have the **ability to prevent tears.**

up to **39%**  
improvement  
in tensile strength

### Tensile Strength



# COTTON DURABILITY

Contact your Cotton Incorporated Executive Account Manager  
to see the latest collection of durable performance products.



Cotton  
Incorporated

Cary, NC  
New York  
Hong Kong  
Shanghai  
Osaka  
Mexico City

AMERICA'S COTTON PRODUCERS AND IMPORTERS Service Marks/Trademarks of Cotton  
Incorporated. © 2018 Cotton Incorporated

Source: 1 - CCI & Cotton Incorporated 2016 Activewear Study, 2 - Cotton Incorporated's *Lifestyle Monitor™* Survey 2016.