HIPROTEC

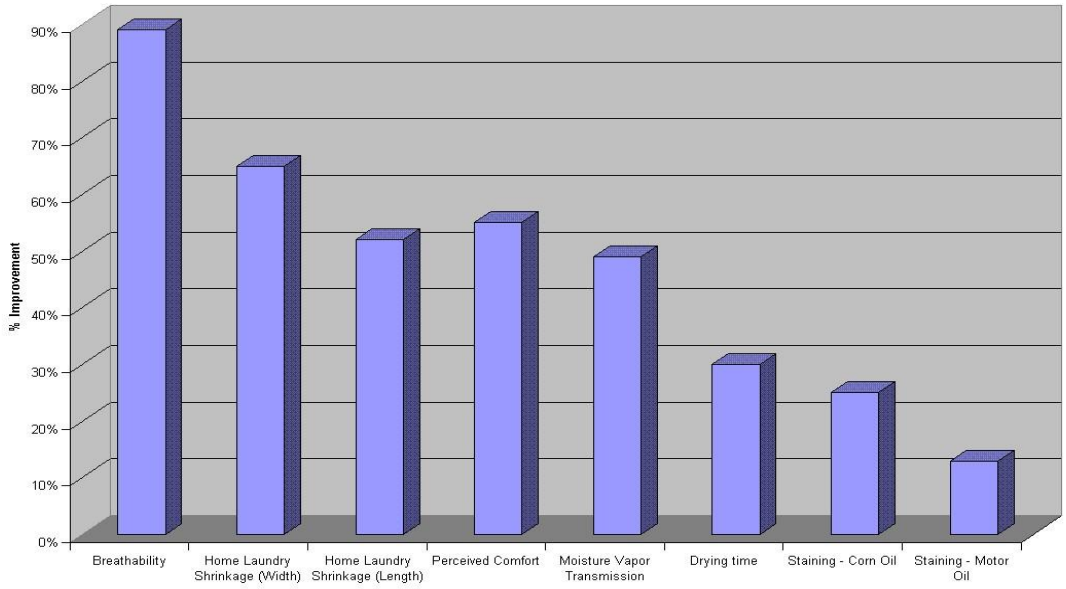
Hilados y Productos Técnicos Textiles, S.L

COMFORT

DRYTEX® comfort yarn is an innovative product which uses a series of patented polymers with microfibres employing a revolutionary technology that exhibits extraordinary properties incorporating cotton aesthetics with the performance of a synthetic. Is a semi dull yarn optically brightened, disperse dyeable which can be dyed at lower temperatures than conventional polyester.

These properties are shown on the following figure:

When we compare **DRYTEX® comfort** versus cotton:



PROPERTIES OF **DRYTEX® COMFORT** YARNS

- Cotton like aesthetics with the performance of a synthetic. Lower laundry shrinkage, piling, more perceived comfort, colourfastness and tenacity.
- Inherent moisture management.
- Excellent dye ability, colour retention, and ease of care properties.
- Superior dimensional stability.

WHAT PRODUCTS CONTAIN **DRYTEX® COMFORT?**

- Casual slacks.
- Runner's tees.
- Jog bras.
- Athletic shorts.
- Men's and Women's casual shirts.
- Casual and sport socks.

COMFORT

Socks have gotten a toe-hold on new yarn technology with DRYTEX® COMFORT engineered polymers mix. And they are now serious gear.

It's the foot after all, that takes the shock of the body, that springs into action. A complex structure of 26 bones, 33 joints, 107 ligaments, 19 muscles and tendons, this seemingly delicate part of the anatomy is a virtual powerhouse of performance. When it feels good.

When it's uncomfortable, hot, or clammy, there goes the game.

That's why **HIPROTEC** brings patented polymer engineering to the foot soldiers of competition; athletic and casuals socks.

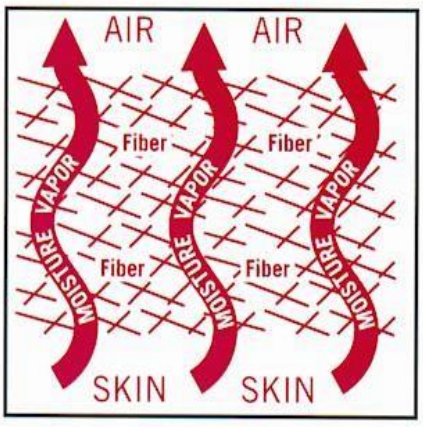
Socks have become sport-specific, a foot-first approach to performance.

For a comforting softness, and moisture management that gets you through long-hauling training, there is the luxury of **Drytex® comfort**.

Although it's unique cotton aesthetic, this yarn compete 100% in the low abrasion, high comfort game. It never goes flat, never gets soggy, never lose their softness. Simply a better sock.

"The best moisture-wicking socks are made primarily of synthetic fibres"

American Podiatric Medical association



www.drytex.es

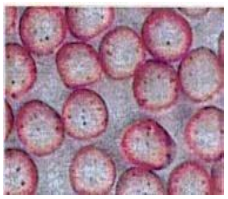
COMFORT

A FIBER FOR THE SENSES

Drytex®comfort. yarn employs a revolutionary technology designed to provide the aesthetics of
a natural fiber, but with the performance of a synthetic. These properties are listed below comparing **Drytex® comfort** to competitive high-performance polyester, cotton, acrylic,
nylon, and wool. Realization of these improvements requires processing at conditions optimised for the new yarn.

	Drytex® comfort	*High performance* ***PET***	***Cotton***	***Wool***	***Acrylic***
ABRASION RESISTANCE	Excellent	Excellent	Fair	Fair	Fair
PILLING	Excellent	Good	Fair	Fair	Fair
COLORFASTNESS	Excellent	Good	Fair	Fair	Excellent
SHAPE RETENTION	Excellent	Excellent	Fair	Fair	Good
MOISTURE TRANSPORT	Excellent	Excellent	Poor	Poor	Excellent
DRYING TIME	Excellent	Excellent	Fair	Fair	Fair
RESISTANCE TO STAIN	Good	Good	Fair	Fair	Good
ATMOSPHERICALLY DYEABLE	Yes	No	Yes	Yes	Yes

Drytex® comfort



polyester

Cotton

The unique properties that make this product atmospherically dyeable require the dye procedures be changed from those of standard polyester. Even through **Drytex® comfort** yarn
is atmospherically dyeable, dispersed dyes must be used.

The pictures above demonstrate the deeper dye penetration achieved by the patented polymer technology that enables darker shades, brighter colors, and enhanced colorfastness.

COMFORT

Drytex® comfort Dye Process Information

- **Drytex® comfort** can be dyed with normal disperse* dye procedures and temperatures. To insure moisture transport an adequate scour must be done prior to dye. Any add on softeners must be hydrophilic in nature so as not to reduce performance. Additionally, a post dye scour is required in order to remove any material that is re-deposited during dyeing that would inhibit moisture transport.

- Preparation
  Goods may contain oils, waxes, sizes or tints that require removal prior to dye. Typical scours contain surfactants and are adjusted to be slightly alkaline (pH-9) with TSPP or soda ash. Enter goods at 120ºF and raise to 160ºF - 180ºF. Run 30 minutes then cool and rinse. If scouring with soda ash neutralize using acetic acid and rinse well.

  - Typical Disperse* Dye Procedure
    Fill machine with water, heat to 120º add:
    - High temperature leveler – 0.5 to 2.0%.
    - *Sequestering agent if needed.
    - Acetic acid – pH 4.0-5.0.
    - Circulate 10 minutes at 120º F.
    - Slowly add predissolved dyes.
    - Circulate 10 minutes at 120ºF.
    - Raise at 3ºF per minute to 170ºF.
    - Raise at 2ºF per minute to 265ºF.
    - Run for 20-30 minutes depending on shade.
    - Cool slowly to 160ºF
    - Sample shade – If o.k. drop and rinse will.
    - Dry at 250ºF, Heat set at 350ºF if required.

Key Notes

- Adequate scouring is very important to insure level dyeing and proper moisture transport. Especially important is a good post dye scour to remove any re-deposited material from dyeing that can impede the moisture management properties of the fiber/fabric. The use of water-soluble needle oil lubricants in knitting may be required if spotting occurs.
- Nonionic chemicals should be selected when possible.
- Consult local dye suppliers for proper dye or chemical alignment and suggested procedures.