STYLE 101

FiT FROM HOME TREND

The Ultimate Secret

BEHIND THE COMFORT OF YOGA APPAREL

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Study & Analysis of Fibres and Textiles

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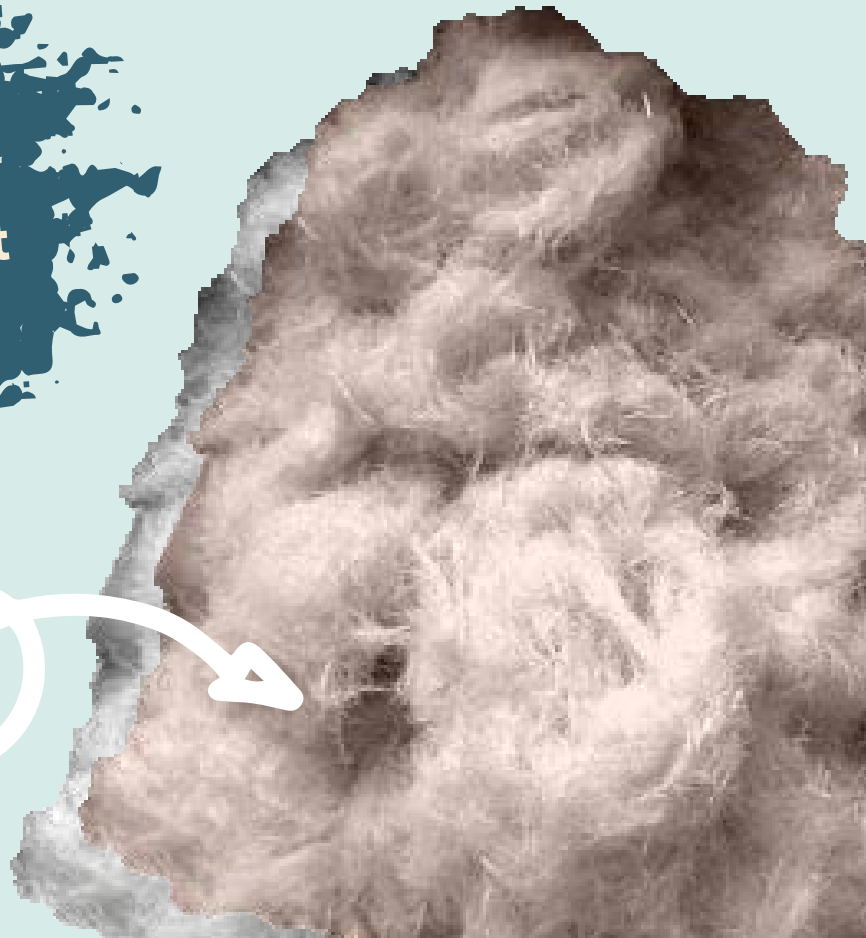
The Fun Fact

How can a yoga pants and activewear feel so comfy and stretch at the same time?

Have this question ever pop up in your head? The answer is simply because these apparel are made from fabric that is blended with an elastic fiber.

which is called as

SPANDEX



The History Behind

SPANDEX FIBER

The development of spandex was started during World War II. At this time, chemists took on the challenge of developing synthetic replacements for rubber. Two primary motivating factors prompted their research. First, the war effort required most of the available rubber for building equipment. Second, the price of rubber was unstable and it fluctuated frequently.

The first spandex fibers were produced on an experimental level by one of the early pioneers in polymer chemistry, Farbenfabriken Bayer. He earned a German patent for his synthesis in 1952. The final development of the fibers were worked out independently by scientists at Du Pont and the U.S. Rubber Company. Du Pont used the brand name Lycra and began full scale manufacture in 1962. They are currently the world leader in the production of spandex fibers.

the common misconception

SPANDEX

is not a fabric.

Spandex is a lightweight, synthetic fiber that is used to make stretchable clothing such as sportswear. It is made up of a long chain polymer called polyurethane, which is produced by reacting a polyester with a diisocyanate. The polymer is converted into a fiber using a dry spinning technique. First produced in the early 1950s, spandex was initially developed as a replacement for rubber.

This term is not a trademark, and it is, in fact, an anagram of "expands." Spandex was never intended to be the primary term used to refer to elastane fabric, but the term stuck in the consumer mind, and most Americans and Canadians now refer to this textile with this term.

The Terminologies

SPANDEX

Spandex is an anagram of "expands." A lightweight, synthetic fiber that is used to make stretchable clothing. It is made up of a long chain polymer called polyurethane, which first produced in the early 1950s, as a replacement for rubber.

ELASTANE

Most Europeans use variants of the term "elastane" to refer to this type of fabric. Elastane is an elastic polyurethane material, used for hosiery, underwear, and other close-fitting clothing.

LYCRA

This term is a registered trademark of the DuPont Corporation. Only spandex made by DuPont can be called Lycra, but this fabric is chemically identical to fabrics that called as elastane, and it has the same attributes.

THE FABRICS

Production Around The World

UNITED STATES

BRAZIL

INDIA

PAKISTAN

CHINA

FUN FACT

The fabric was first created in United States with China as the biggest exporter.

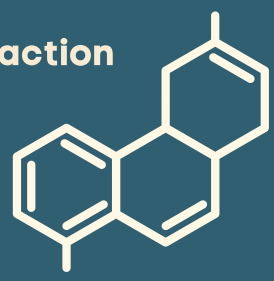
How is Lycra Fabric Made?

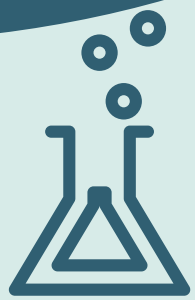
Preproduction of a Prepolymer

Accomplished by mixing the chemical macroglycol and diisocyanate monomer with a special type of reaction vessel.

Chain Extension Reaction

The porepolymer is then reacted withdiamine acid chemical.





Diluting

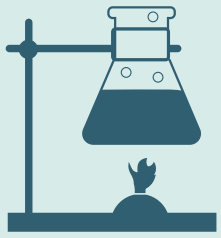
The solution is diluted with a solvent to make it thinner and easier to handle.

Extrusion

This cell spins to produce fibers and cure the elastane material. The solution is pushed through a spinneret.

Twisting

The strands are then bundled together as they exit the cynlindrical spinning cell.



Heating

Fibers are heated within a nitrogen and solvent gas solution to form a liquid.

Finishing

Next, a chemical is used to treat the elastane material as a finishing agent.

Weaving

Lastly, the Lycra yarn is transferred and shipped out to a textile manufacturing plant.

Fabric Overview : The Advantages & Disadvantes

Advantages

- Lightweight

-Retains original shape

-Abrasion Resistant

-Stronger than rubber

-Soft, smooth, supple

-Resists body oils, perspiration, lotions, detergents

-No static or pilling

Disadvantages

- White color yellow within age

- Heat sensitive

- Harmed by chlorine bleach

- Nonabsorbent

Where Can We Find

SPANDEX FIBER

Bikini & Swimsuit

Ski Pants

Activewears

Tips & Tricks

Care Guide : Lycra Fabric

Do Not Dry Clean

Spandex-containing clothes should not be dry cleaned. The solvents used in the process can swell the fibers, which can cause the garment to become misshaped. Not to mention that it tends to retain the smell of the solutions! And anyway, there’s really no reason to dry clean them as they’re perfectly safe to wash in water.

Using Baking Soda

You can remove strong odors from the fabric with baking soda. Fill a large bowl with lukewarm water and mix in a cup of the powder. Once it’s dissolved, place the garment in and let it soak for several hours (overnight if necessary). Afterwards, rinse it thoroughly with clean water. The smell should be gone by the time the item is dry.

Removing Stains

Remove the stain as soon as possible. Start by soaking the problem area with cold water. It’s important that you do not use hot water as the heat will actually set the stain, which will make it more difficult to remove. Apply a small amount of Active Detergent to the stain and rub it gently with a soft-bristled brush. Avoid scrubbing it as that can cause the spot to spread out. Wash as normal once the stain is removed.