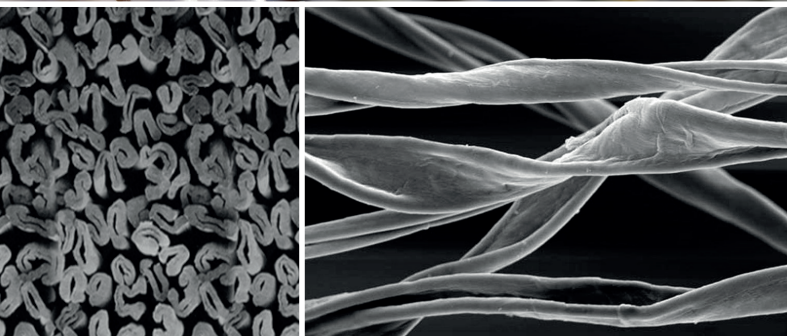


# MATERIALS & FABRIC

*overview*

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# FIBERS

*natural*

## ◀ COTTON

Cotton is characterized by its softness, pliability, strength, absorbency and breathability. Therefore it is pleasant to the touch, but also resistant and washable at higher temperatures. It is often used in combination with synthetic materials, such as elastane.



### ORGANIC COTTON

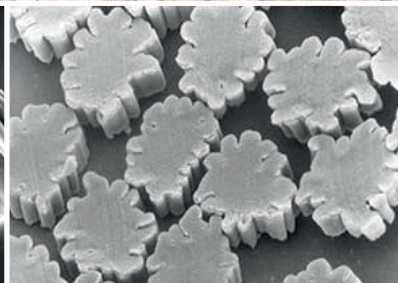
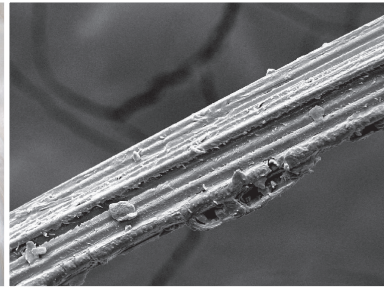
Cotton produced ecologically and further processed under the strict supervision of all manufacturing processes. The biggest producers are Turkey, India, USA and China.



### SUPIMA®

The brand represents the finest 1 % of the world production. This US grown Pima cotton has over a hundred years' tradition. Its unique extra-long fibers are twice the strength of regular cotton, so it doesn't stretch out of shape, break or tear easily. Supima cotton fabric is incredibly smooth, durable, and non-pilling. Clothes made of it keep their appearance for a long time.





# FIBERS

*synthetic – from natural materials*

## ◀ BAMBOO

Bamboo fiber is stronger and three times more absorbent than cotton. It keeps its properties for a long time, even if washed very frequently. We do not recommend using fabric softener as it may reduce absorbency of the material.

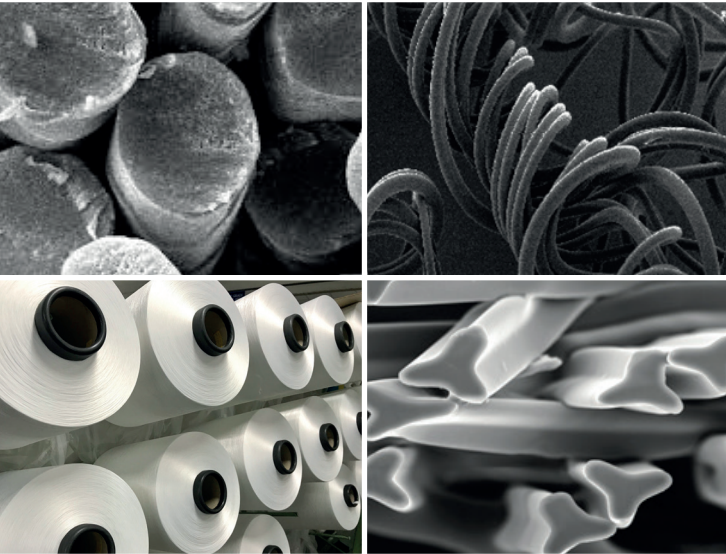
## ◀ VISCOSE

Fiber made from regenerated cellulose. The input material for the production is either wood or cotton pulp. Viscose is breathable and has great absorption features. Compared to cotton, it is softer, shinier and finer.

# FIBERS

*synthetic – from synthetic materials*

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## ◀ ELASTANE

Very fine and strong fiber from polyurethane, renowned after its distinctive elasticity. Elastane can be stretched between three and seven times its original length without breaking. It is always used in combination with other materials, ensures dimensional stability, increases elasticity and reduces material wrinkling. Elastane is prone to high temperatures.

## ◀ POLYESTER

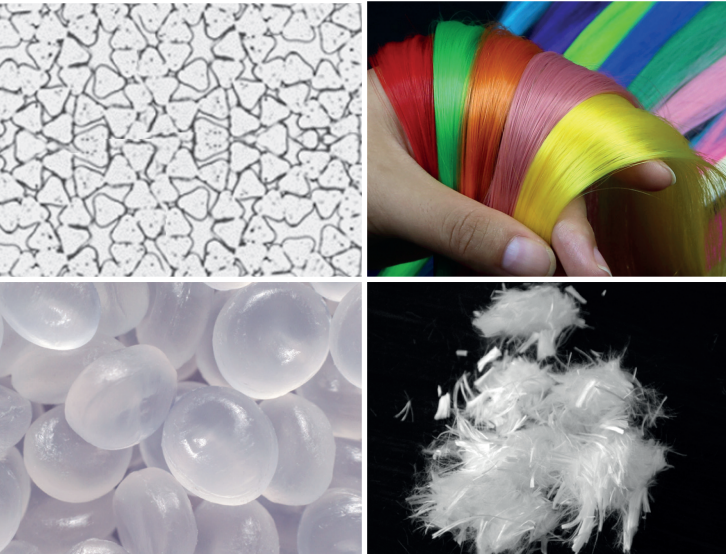
This highly tenacious fiber is quick-drying, making it ideal for clothes meant for sports and other physical activity. Polyester can be quite thick or very fine (micro polyester), providing wide range of possible characteristics. Using other modifications, its properties can be changed further to fit its end purpose. For example, it can be impregnated, or altered to provide better insulation.



# FIBERS

*synthetic – from synthetic materials*

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## ◀ POLYAMIDE

With high durability and abrasion resistance twice that of polyester, materials from polyamide are great at holding their shape. This is aided by low moisture absorption, resulting in a very easy-care product. It is manufactured in a way similar to polyester, and so it can also be made very thick or extremely fine, and with wide range of properties depending on many possible modifications.

## ◀ POLYPROPYLENE

Polypropylene is made into very smooth and firm fibers. These give the material high abrasion resistance and make it hydrophobic, meaning the fibers repulse water, so it holds shape even in very damp environments. Final fabric tends to be very light, but provides good thermal insulation.



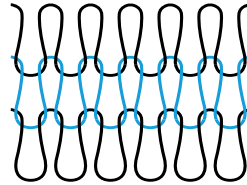
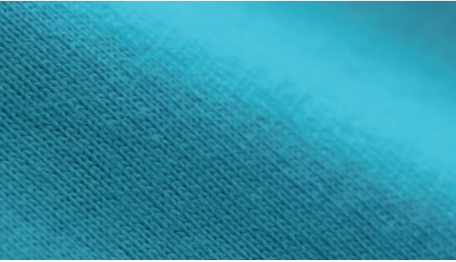
# YARNS

1. Cotton plant has been grown in tropics and subtropics - namely areas of Egypt, India and Peru - for thousands of years. Fiber is extracted from the seed, and a single plant gives up to 30 seeds of around 7000 fibers each.
2. 70 % of cotton is picked by hand, with daily yield being around 120 kg per field.
3. Picked cotton is pressed into bundles of 200 kg which are transported for processing.
4. First, it has to be washed clean of dirt, plant remains and other impurities.
5. Washed cotton goes through a carding machine which combs the fibers into a sheet, which is then drawn into long strips called „sliver“.
6. Sliver is stretched and twisted into a thin yarn, which is spun on a spool.
7. Finally, the yarn is ready to sell.

# PATTERNS

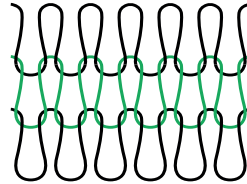
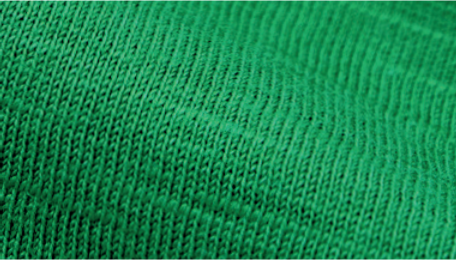
*knitted*

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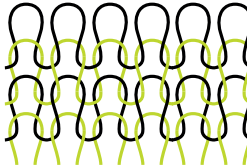
## ◀ SINGLE JERSEY

Fine weft knitted fabric with characteristic dendritic columns on the outside and arches on the reverse side. The weave is ductile, soft and easy to unravel. The quality of the final product depends on that of the thread used. Our products are manufactured from high quality ring spun thread.



## ◀ SINGLE JERSEY SLUB

Fine weft knitted fabric with characteristic structure of slub fabric. To achieve this effect, a yarn with thicker and thinner sections (made by varying the tightness of yarn's twist) are used throughout the length of the knit. This fabric is also characterized by its elasticity.



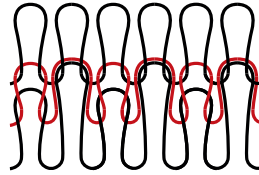
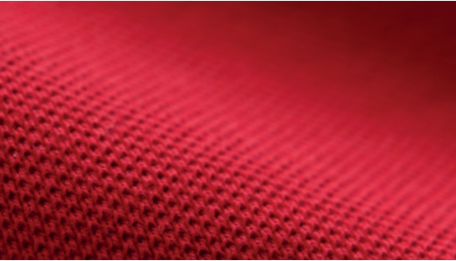
## ◀ DOUBLE FACE

Double face knit, also called double jersey. The knit has densely interleaved columns on both sides. Usually only front stitches are visible, back stitches can only be seen when the fabric is stretched, but both sides look the same. It is highly elastic in transverse direction.



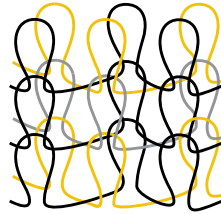
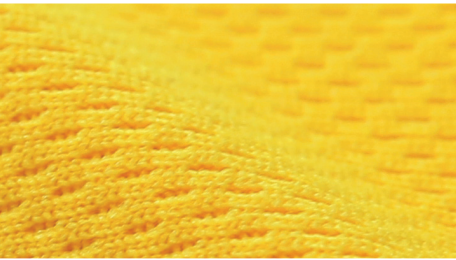
# PATTERNS

*knitted*



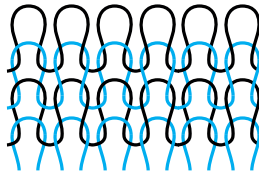
## ◀ PIQUE

Weft knitted fabric patterned with geometrical relief on outside. On the reverse side, it is enhanced with supplementary thread. This knitting pattern is popular for production of polo shirts and other clothing for sports and leisure activities. The products made from it are breathable and easy to maintain.



## ◀ INTERLOCK PIQUE

Warp knitted fabric with two fully interlocking, interleaved with a single-face row. As a result, the front of the fabric has large, diagonally patterned stitches. These make the material extremely breathable, so it is ideal for sports clothing.



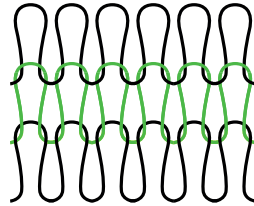
## ◀ RIB KNIT

Double-sided knitted fabric consisting of rib pattern. It is either 1:1 or 2:2 depending on the ratio of face and back columns which regularly alternate. 1:1 means one face and then one back column, 2:2 has two face and then two back. Because rib knit is extremely flexible in one direction, it is often used for collars, cuffs and plackets.

# PATTERNS

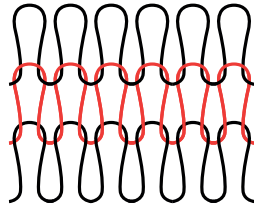
*knitted*

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## ◀ FLEECE

Weft knitted fabric characterised by densely brushed teased surface. This makes it very soft, insulating, long lasting and easy-care. Fleece is susceptible to pilling, but this can be mitigated by antipilling treatment. Products made of fleece are suitable for embroidery and laser engraving.



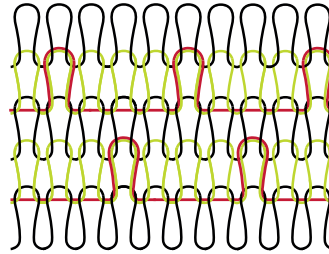
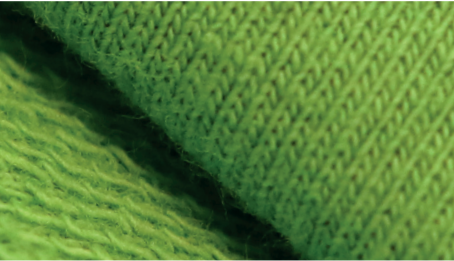
## ◀ STRETCH FLEECE

Functional stretch knit fabric with brushed inner side and smooth outside. Features great thermal isolation, while being lightweight and breathable. These properties also mean it dries fast, and so it is suitable for sports and other physical activities. The inner side has antipilling treatment.

# PATTERNS

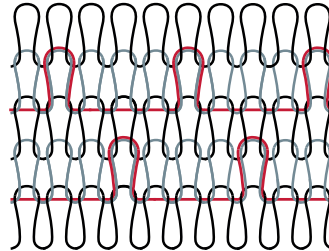
*knitted*

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## ◀ **FRENCH TERRY - NOT BRUSHED**

Weft knitted fabric characterised by dendritic columns on the outside and arches on the reverse side. The knit is strengthened by an additional thread running along the reverse side. This increases the durability, volume and absorbency of the resulting fabric.



## ◀ **FRENCH TERRY - BRUSHED**

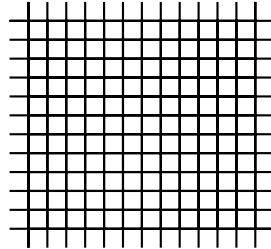
Weft knitted fabric characterised by dendritic columns on the outside and brushed soft ones on the back. The reverse side is strengthened by an additional thread which is combed out. This makes the fabric more voluminous and thermally insulating.



# PATTERNS

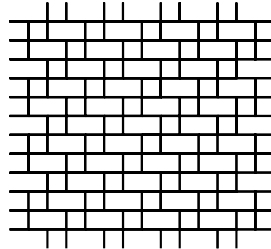
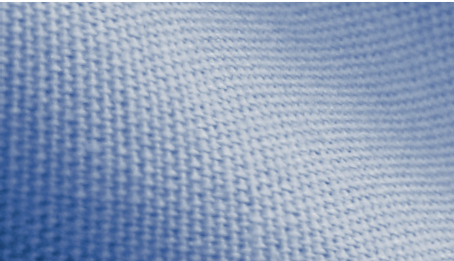
*woven*

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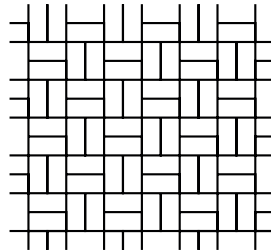
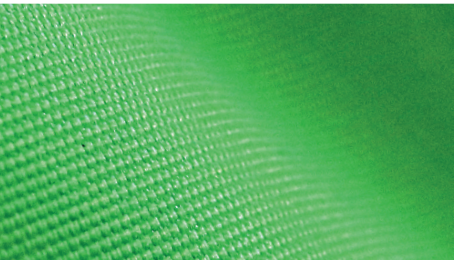
## ◀ PLAIN WEAVE

Strong, very regular weave with equal amount of warp and weft threads, in a simple dense criss-cross pattern. This creates a smooth and uniform surface with even checkerboard pattern, which is perfect for printing and embroidery. Cloth fabrics are manufactured from high quality combed cotton or polyester.



## ◀ POPLIN

Soft and pleasant, yet stiff enough, fabric made by altering the basic plain weave by putting in higher amount of warp than weft threads, resulting in a slightly diagonal pattern. This material is favoured for the production of shirts because of its characteristics.

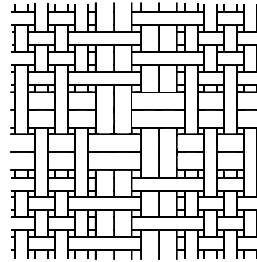


## ◀ OXFORD

Very sturdy fabric made with a type of plain weave where at least two warp and two weft threads interleave, giving it a larger pattern. Both natural and synthetic yarns are often used to make it, as the resulting cloth is very versatile.

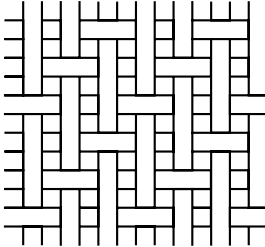
# PATTERNS

*woven*



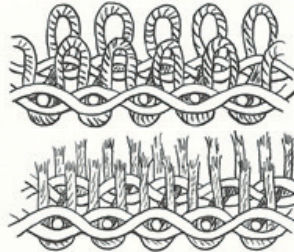
## ◀ RIP STOP

This is plain weave with thick warp and weft threads interwoven every 5 - 8 mm, creating a gridded structure. Resulting fabric is, because of this „grid“, much more resistant to ripping and tearing, giving it its name.



## ◀ TWILL

Weave characterised by diagonal parallel ribs, created by alternating warp and weft threads. Twill is also stretchy, while still being very robust and strong, making it suitable for workwear or denim. It is also popular material for caps. A brush finishing makes the surface softer with matt appearance.

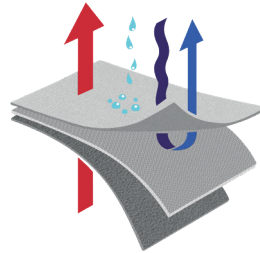
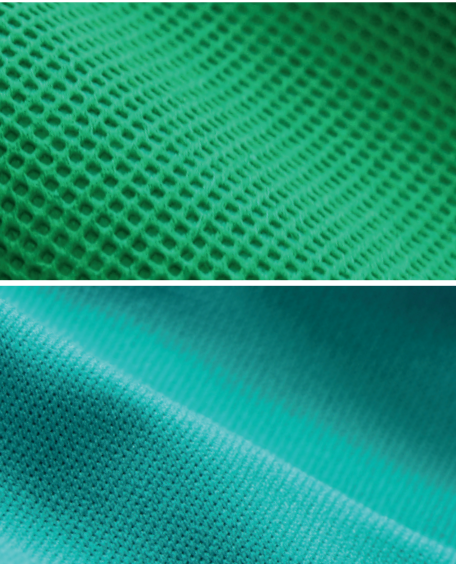


## ◀ TERRY

A three-dimensional fabric with solid loops on both sides of the base material. Thanks to this structure, it is very soft to the touch and has outstanding absorbency, making it ideal for towels. It is usually made of 100 % cotton or blend of bamboo fiber and cotton.

# PATTERNS

*special*



## ◀ NONWOVEN FABRIC

Fabric produced without knitting or weaving. The input material (a melt of various synthetic polymers) is bonded using heat, pressure and various glues. The result is a smooth, flat and porous fabric with high tensile strength, also characterised by low abrasion resistance and bending strength. The material is popular for its low price and good insulation properties.

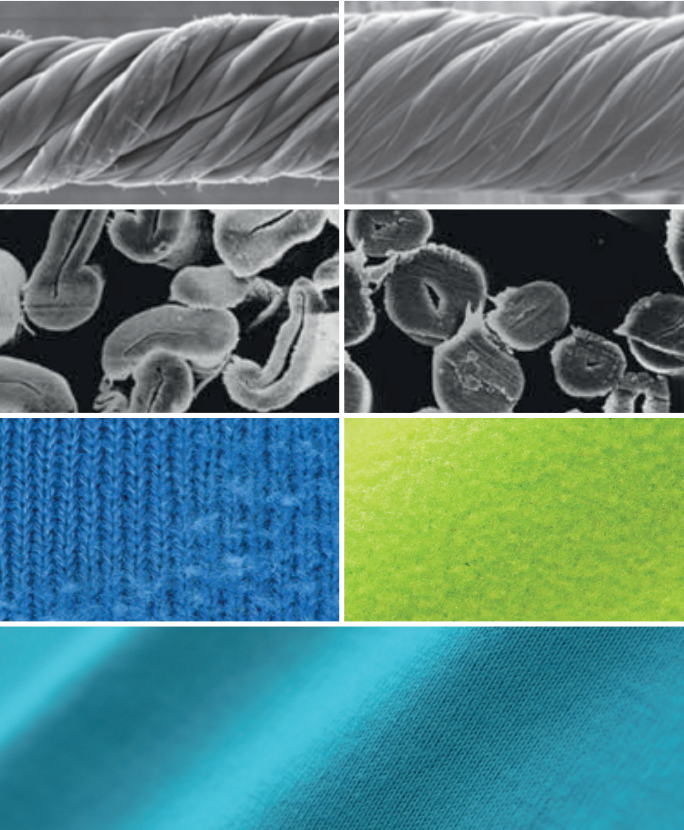
## ◀ SOFTSHELL

Softshell is a textile made from two or three layers of fabric laminated together. Resulting material is light but warm, elastic with high mechanical resistance. Softshell can be with or without membrane; if a membrane is added, the fabric can be simultaneously waterproof and breathable. As it provides good protection against the elements (water, wind), it is often used in outdoor and sports clothing.



# FINISH

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## ◀ **PRESHRUNK COTTON**

Cotton which goes through an extra step during manufacturing, which reduces the space between each fiber in the yarn. After that, the fibers cannot shrink anymore during washing and drying, allowing products made of it to be washed at higher temperatures. This helps eliminate difficult stains and dirt, as well as microbes.

## ◀ **MERCERIZED COTTON**

The process of mercerization consists of briefly immersing the cotton yarn into a chemical bath for the purpose of changing their shape and leveling uneven fibers. The fiber cross-section thus obtains an almost perfect circular shape. The final material becomes smoother, softer and glossier. Mercerization results in higher strength and better color stability of the material.

## ◀ **ANTIPELLING FINISH**

This material treatment minimizes the release of fibers from the fabric, thus preventing pilling. This is achieved by fixating and stabilizing the fibers. The fabric will resist damage due to excessive use and the product lifetime and functionality will be greatly prolonged.

## ◀ **SILICONE FINISH**

The silicone finish is similar to the effect of a fabric softener, but it lasts longer. By washing the fabric in a silicone bath, it becomes softer to the touch, smoother and more resistant to dirt, creating better surface for printing.



# BRANDED MATERIALS

## ◀ **NANotex® RESISTS SPILLS**

Certified fabric which has been fundamentally transformed using nanotechnology. The resulting fabric repels liquids and has extended lifetime, while keeping its original softness and breathability. The surface becomes hydrophobic, meaning water and any other liquid just rolls down, without sinking into the fabric or leaving a trace at all.

## ◀ **3M™ STRIPES**

3M™ retroreflective stripes increase visibility of the person who wears the garment, thereby reducing the likelihood of accidents. 3M™ stripe is composed from a substrate fabric which acts as a straight mirror, on which a layer of tiny microscopic glass beads is mounted. On 1 cm<sup>2</sup> of fabric, there are up to 30 000 beads. These ensure that light is reflected very strongly straight to its source, after going through double refraction.

## ◀ **CORDURA®**

CORDURA® fabric is produced in accordance with the strict standards of the company INVISTA. The main benefits of using this fabric is its exceptional tear, abrasion and stain resistance. Clothing with CORDURA® fabric is made to last.



**CORDURA®**  
BRAND  
F A B R I C

