THE MATERIAL GUIDE

2021

dk company

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DO NOT USE

NATURAL
ANGORA
FUR

SUSTAINABLE MATERIAL GUIDE

There are several challenges in the production of textiles. Our focus is on three main areas – the environment, humans and animal welfare. These are the areas we as a textile company must pay special attention to, in the decision of fibers which we use in our production.

RED ●
Most harmful

Fibers in the red category are the fibers that are most harmful to the planet, humans and animals. In addition, it includes fibers, wherein the recycling is not an option.

YELLOW ●
Good alternative

Fibers in the yellow category are considered to be a good alternative to the fibers from the red pool. The yellow fibers are better for all three focus areas, listed above.

GREEN ●
Best to be used

Fibers in the green category are the best fibers to be used. At this point of knowledge there should be no problems using these fibers and they are also full recyclable. There is a continuous development within sustainable fibers and we therefor constantly need to keep an eye out for any changes.

GREY ●
Under development

Fibers in the grey innovation box are fibers that are under development or are developed. These fibers can be waste and/or recycled materials or new fibers made from more sustainable sources.

BLACK ●
Banned

Fibers in the black category are banned.
DK Company do not accept any form of cruelty in textile production and has therefore actively chosen not to use fibers that could fall into this category. Angora and any kind of fur are deselected due to the poor living conditions of these animals.

PLANET

The clothing industry bears a great burden on the planet and therefor it is our mission to find the best fibres in class, when it comes to do good to the planet. Our focus is on minimize the use of harmful chemicals, pesticides, water consumption or other at all stages of the garment manufacturing process and life cycle. We do our very best to keep abreast of developments in sustainable materials and fibres.

HUMANS

Textile production uses chemicals to provide good quality. That is why our focus is on minimize the use of harmful chemicals. At DK Company we have a testing program where we are testing our different styles to make sure that we are compliant with the legal requirement.

ANIMAL WELFARE

Every year millions of animals are killed to produce wool, leather, down and other fibres for the textile industry. That is why we together with our global partnerships have a special focus on animal welfare and are making sure that all the processes live up to the standard. We make sure that all animal fibres come from secured suppliers that are certified and therefor comply with the different certifications and standards.


COTTON

CONVENTIONAL COTTON

Replaced by Organic cotton | Recycled cotton | Better Cotton (BCI)

Facts

Cotton is a natural fiber that comes from the seedpod of the cotton plant, mostly from India and China. Around 25 million tons are produced each year. It is grown in over 80 countries and its production supports livelihoods of millions of people.

Characteristic

Cotton is a soft, absorbent and breathable fibre.

The benefits

- It is a versatile fibre that can be woven into many fabrics

The challenges

- Intensive use of toxic pesticides and fertilizers, which causes biodiversity loss and can damage farmers' health
- The pesticides used are washed out of soils and pollute rivers and groundwater.
- Many small farmers fall ill or die due to a lack of adequate equipment and knowledge about how to handle pesticides properly.
- Unless managed well, cotton production can use significant amounts of water.

ORGANIC COTTON

Replaces conventional cotton

Facts
Organic cotton is a natural fiber, that comes from the cotton plant, produced to organic agricultural standards.

Characteristics
Cotton is a soft, absorbent and breathable fibre.

The benefits
- No toxic chemicals are used in the growing of organic cotton
- Better health for farmers, since they are not exposed to toxic chemicals in the field or through their food and water supply
- Reducing poverty for cotton farmers and workers on cotton farms through higher yields
- The farming methods support biodiversity and healthy ecosystems, which improve the quality of soil

The challenges
- High usage of water
- The cost is higher than conventional cotton

BETTER COTTON INITIATIVE

Replaces conventional cotton

Facts

The Better Cotton Initiative is a global non-profit organization that exist to make global cotton production better for the people who produce it, better for the environment it grows in and better for the sector's future, with full transparency in the supply chain.

Characteristic

Cotton is a soft, absorbent and breathable fibre.

The benefits

- Increasing the transparency of the cotton supply chain
- Price and availability

The challenges

- Communication on not being 100% organic

To earn a Better Cotton license, farmers must show that they follow below six principles:

- Minimizing the use of toxic pesticides
- Water is used efficiently
- Improves health of the soil
- Protecting natural habitats and biodiversity
- Preserving and caring for the health of the fibre
- Promoting better working conditions

BCI Better Cotton Initiative™

BetterCotton.org

RECYCLED COTTON

Replaces conventional cotton

Facts

Recycled cotton is produced from post-consumer or pre-consumer waste material.
The use of recycled cotton reduces the use of raw materials, water, chemicals and energy.

Characteristic

Cotton is a soft, absorbent and breathable fibre.

The benefits

- Reduces natural resource consumption
- Reduces waste and is kept out of landfills
- Reduces environmental pollution
- Decreases landfill space requirements

The challenges

- The quality of recycled fiber does not have the same quality value equal to conventional or organic cotton
- Needs to be mixed with other fiberes

KAPOK

Replaces conventional cotton

Facts

Kapok is an organic cellulose-based fiber and comes from the tree called Ceiba which grows in the rainforest in South- and Central America, India and western part of Africa. The kapok fiber has particularly good thermal properties and a silky-smooth surface, and there for the fibre is often called silk cotton.

Characteristic

Very good as filling, isolating and heat regulating and moisture cannot be absorbed to the fibre.

The benefits

- 100% organic
- No use of pesticides or insecticides
- Isolating and heat regulating
- The lightest fibre in the world; contains 80% air and is 8 times lighter than cotton

The challenges

- The fiber easily breaks
- Must be blended fiber for main fabric
- Short fibre

CIRCULOSE®

Facts

Circulose® is a new dissolving pulp product made by gently recovering cotton from worn-out clothes. The clothes are shredded, de-colored and all the metal parts are taken off and turned into a slurry. Contaminants like plastic polyester are taken out. The slurry is dried to produce sheets of pure Circulose. The sheets are packaged into bales and are shipped to be made back into natural textile fibres. This means that the fibre is produced in a closed loop.

Characteristic

Soft, breathable, lightweight and comfortable

The benefits

- Circular fashion; made from discarded textile
- Uses renewable energy
- Closed production loop

The challenges

- The availability is limited


VISCOSE / MODAL

VISCOSE | BAMBOO VISCOSE

Replaced by EcoVero, LivaEco, Liva Reviva or FSC certified viscose

Facts

Viscose, also recognized as Rayon, is a man-made regenerated cellulose fibre, which is derived from cellulose made from the dissolved wood pulp of trees (beech, pine, spruce, eucalyptus, bamboo). Viscose is the third most used fibre, after polyester and cotton.

Characteristics

Breathable, drapes well, good color retention, highly absorbent, very smooth

The benefits

- The cost is very low

The challenges

- 120 million trees are cut down every year for viscose production some of which are from endangered forest
- Manufacturing process is very polluting and harmful to the environment due to its highly chemical-intensive process
- Workers may be exposed to toxic products, from chemicals that are used in production
- The use of carbon disulphide in standard viscose fiber production generates air emissions
- Disposal of untreated wastewater into local water, causes contamination and leads to health problems for the local population

LENZING™ ECOVERO™

Replaces viscose

Facts

EcoVero™ is a fiber made from wood pulp, from sustainable forestry plantations, that are independently certified by industry-leading associations

Characteristics

Pleasant on the skin, breathable

The benefits

- Use of certified and controlled sustainable wood sources (FSC® or PEFC® certified)
- 50% less emissions than generic viscose
- 50% less energy and water than generic viscose
- Fiber identification technology, so it is possible to identify the fiber in the final product

The challenges

- The price is higher than conventional viscose

THE FOREST STEWARDSHIP COUNCIL (FSC) VISCOSE

Replaces viscose

Facts

FSC is a global, non-profit organization dedicated, to increase responsible forest management worldwide.

Characteristics

Breathable, drapes well, good color retention, highly absorbent, very smooth

The benefits

- Prohibits deforestation
- Restricts the use of highly hazardous pesticides.
- More transparent supply chain

The challenges

- The production of turning the wood in to a viscose fiber is not sustainable

TENCEL™ LENZING™

Facts

Tencel fibres are derived from sustainable wood sources, harvested from certified and controlled sources. Tencel fibres are produced in an environmentally responsible closed loop production process (based on solvent spinning). Lenzing has now reached a Tencel fibre which contains 30% post-consumer waste which makes this fibre circular.

Characteristics

Soft, breathable, lightweight and comfortable

The benefits

- The fibers are derived from sustainable wood sources
- 99% of the water and solvents used in production are recycled and used again
- The pulp is dissolved in a non-toxic organic solvent
- The manufacturing process is reasonably low in water intensity and reasonably low in energy intensity
- The solvent is recycled in a closed-loop process which results in low emissions

The challenges

- The cost is a bit higher
- The quality of the fibre does not match the conventional viscose

TENCEL™ Luxe

Facts

Tencel Luxe is a new lyocell filament yarn. The filaments are produced in a closed loop and is made of wood pulp which is sourced from sustainable wood that is in line with Lenzing's other fibres.

Characteristics

Silky smooth feel, breathable, outstanding colour fastness.

The benefits

- Lower water consumption that other natural fibres
- Lower energy-use that other natural fibres
- Good colour fastness that enables designers to express bold colours

The challenges

- The price is high
- The availability is limited

LYOCELL

Replaces viscose

Facts

Lyocell is a regenerated cellulose fibre, in which the eucalyptus tree is the primary basis for the fibre production. The eucalyptus tree is a very fast-growing tree that does not require irrigation, while offering a very high yield, causing many environmental benefits.

Characteristics

Soft, breathable, lightweight and comfortable

The benefits

- The pulp is dissolved in a non-toxic organic solvent
- The solvent is recycled in a closed-loop process which results in low emissions
- 99% of the water and solvents used in production are recycled and used again
- The manufacturing process is reasonably low in water intensity and reasonably low in energy intensity

The challenges

- The price is a bit higher
- The quality of the fiber does not match the conventional viscose

NOTE

Lyocell and Tencel is the same. Lyocell is a fibre and Tencel is a trademark from the company Lenzing.

TENCEL™ LYOCELL WITH REFIBRA™ TECHNOLOGY

Replaces viscose

Facts

Refibra™ lyocell is a fibre made from a blend of pulps that include cotton scraps and wood. The wood pulp used, is a renewable raw material that comes from sustainably managed forests. Lenzing has now reached a Tencel fibre which contains 30% post-consumer waste which makes this fibre circular.

Characteristics

Soft, breathable, lightweight and comfortable

The benefits

- Produced in a closed-loop production cycle; the solvents used to process the wood and cotton fibers are 99.7% captured and can be used repeatedly
- The process also reduces the use of water by 95% compared to cotton fabric manufacturing and does not pollute the air, soil or water
- Pre-consumer waste is being used instead of thrown away
- Low water use

The challenges

- The availability is limited

LIVAECO MODAL (BIRLA)

Replaces Modal

Facts

LivaEco Modal is a is a fiber made from wood pulp and is in a closed loop, sourced from FSC® certified sustainable forests.

Characteristics

Soft, breathable, lightweight and comfortable.

The benefits

- FSC certified
- Lower water consumption than other natural fibres
- Lower greenhouse gases in the production process than other natural fibres

The challenges

- The availability is limited

LIVA REVIVA (BIRLA)

Replaces viscose

Fact

LivaEco Reviva is a lyocell fibre made from a blend of pulps that include 20% pre-consumer textile waste and 80% wood pulp. The used wood pulp is a renewable raw material that comes from sustainably managed forests.

Characteristics

Soft, breathable, lightweight, and comfortable.

The benefits

- Liva Reviva is FCS certified
- Low greenhouse gas emissions
- Pre-consumer waste is being used instead of thrown away
- Low water use
- Liva Reviva is Recycled Claim Standard certified

The challenges

- The availability is limited

LIVAECO (BIRLA)

Replaces viscose

Fact

LivaEco is a is a fibre made from wood pulp and is in a closed loop, sourced from FSC® certified sustainable forests.

Characteristics

Soft, breathable, lightweight, and comfortable

The benefits

- FSC certified
- Lower water consumption than other natural fibres
- Lower greenhouse gases in the production process than other natural fibres

The challenges

- The availability is limited


POLYESTER /
POLYAMID

POLYESTER

Replaced by recycled polyester

Facts

Polyester is a synthetic fiber derived from oil, a non-renewable source,
which in an advanced chemical process is converted to plastic and further processed into synthetic fibers. More than 70 million barrels of oil are used to make polyester each year.

Characteristics

Polyester fibres are extremely strong, durable and have wrinkle free properties.

The benefits

- Polyester is 100% recyclable

Common challenges

- Made from a carbon-intensive non-renewable resource
- Polyester is not biodegradable
- It requires more than double the energy of conventional cotton to produce.
- Microplastics released when washed

RECYCLED POLYESTER

Replaces polyester

Facts

Recycled polyester is a material that has been recycled from used materials.
The most common source of raw materials for recycled polyester is old PET bottles and raw material waste from manufacturing industry.

Characteristics

Polyester fibres are extremely strong, durable and have wrinkle free properties.

The benefits

- Lessens our dependence on petroleum as a source of raw materials
- Requires 33% to 53% less energy than virgin fibre
- Keeps bottles out of landfills
- It is recyclable

Common challenges

- Microplastics released when washed

POLYAMIDE (NYLON)

Replaced by recycled polyamide

Facts

Polyamide (Nylon) is a synthetic fibre made from petroleum.

Characteristics

Nylon is a very strong, lightweight and durable material

The benefits

- It is possible to recycle the fibre.

The challenges

- The toxic chemical benzene is used to make polyamide
- Nylon manufacture creates nitrous oxide, a greenhouse gas much more powerful than carbon dioxide

NOTE

Polyamide and Nylon are the only fibers where it's allowed to use both names.

RECYCLED POLYAMIDE | NYLON

Replaces polyamide

Facts

Recycled polyamide is a material that has been recycled from waste.
The raw material source for recycled polyamide can be old fishing nets and carpets, and waste from manufacturing industry.

Characteristics

Nylon is a very strong, lightweight and durable material

The benefits

- Reduced amount of landfill disposal and no need of primary crude oil extraction
- Considerable reduction of energy demand
- Up to 34% greenhouse gas emission reduction, depending on the Nylon type and recycling technology.

The challenges

- The price can be more costly

DUPONT™ SORONA

Replaces nylon

Fact

Sorona is renewably sourced and is made of 37% plant-based fibre, which uses 30% less energy and 63% fewer greenhouse gas emissions than a nylon 6. Sorona uses patented technology.

Characteristics

Sorona is a lightweight, wrinkle resistance and durable material

The benefits

- Reduced pilling
- Softness
- Quick dry
- Great insulation
- Various performance benefits
- Oeko-Tex certified

The challenges

- If the material is used as filling, it may tend to accumulate in lumps

MODAL

Replaced by Modal Lenzing

Facts

Modal is a wood pulp based cellulosic fibre, made from pure wooden chips from the beech tree.

Characteristics

Breathable and silky smooth to the touch.

The benefits

- Retain long-lasting color
- It's shrink-resistant

The challenges

- Chemical processing from raw material to fibre
- Some wood is harvested from endangered forest.

TENCEL MODAL

Replaces modal

Facts

Lenzing™ Modal fibers are mainly manufactured from beech wood, sourced from sustainably managed forests

Characteristics

Breathable and silky smooth to the touch.

The benefits

- Made from sustainably harvested beech trees
- Chemicals used in processing are captured and reused
- Uses a non-toxic solvent during the process

Common challenges

- The price is higher than regular modal

TENCEL MODAL (EASTMAN NAIA™)

Replaces Acetate

Facts

Eastman Naia™ is a cellulosic yarn made from wood pulp sourced from FSC trees. The fibres are produced in a closed-loop and is OEKO-TEX® 100 Product Class I. Naia™ is available as filament yarn and as staple fibre.

Characteristics

The fibres are soft and cool, have silk-like aesthetics and is easy-to-care-for.

The benefits

- Low-impact manufacturing process
- No hazardous chemicals are used
- Luxury
- Exceptional versatility
- Excellent wrinkle recovery and pilling resistance

The challenges

- The availability is more limited
- High prices

NAIA™ RENEW

Replaces acetate

Fact

Naia™ Renew is a cellulosic yarn made from 60% sustainably sourced wood pulp and 40% certified recycled waste plastics. Naia™ Renew is produced in a closed loop that prioritizes the safety and environmentally sound use of chemicals.
You can get Naia™ Renew as filament yarn and staple fibre.

Characteristics

The fibres are soft and comfy and are easy-to-care-for.

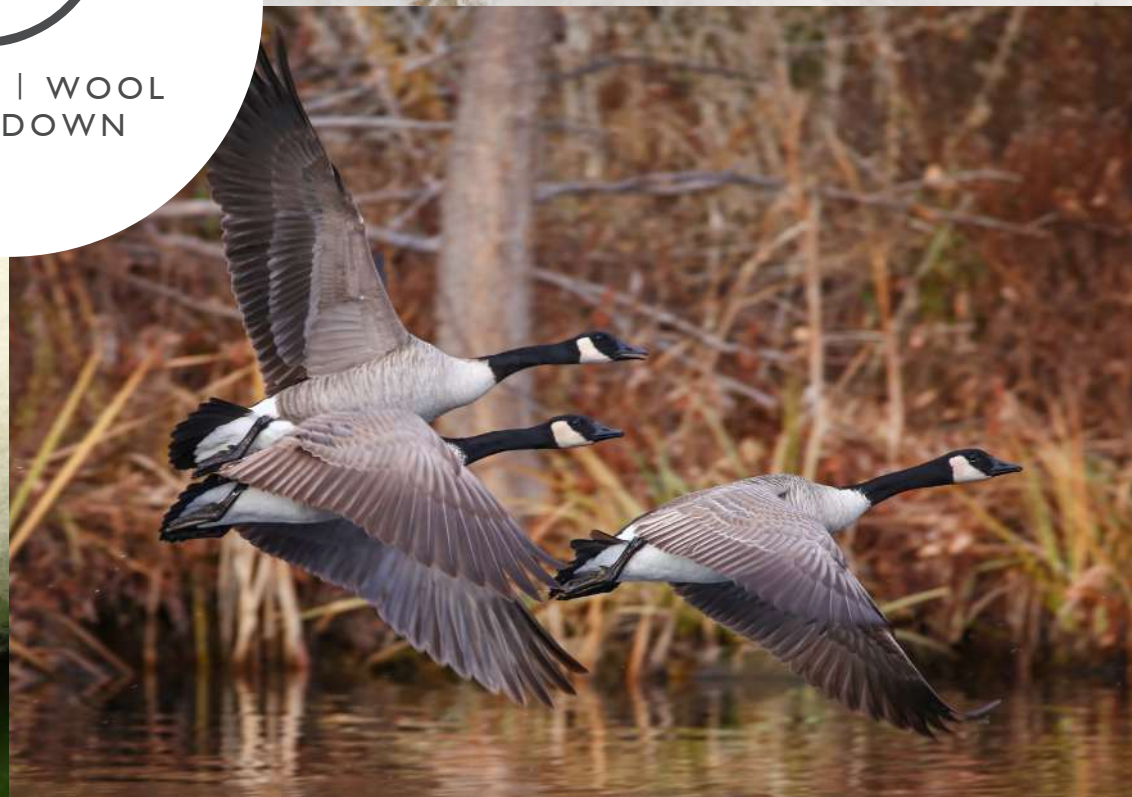
The benefits

- Natural resources are preserved, and carbon footprint is reduced
- Luxurious appearance
- Quick drying
- Softness
- Reduced pilling

The challenges

- The availability is more limited
- High prices

LEATHER | WOOL
SILK | DOWN



LEATHER

Facts
Leather is a material created by tanning animal rawhides.

Characteristics
Leather is very durable, flexible and does not tear easily

The benefits
- It is long-lasting, when cared for
- By-product from the food industry

The challenges
- Around 250 chemicals are used in the tanning process
- People who work with and near the tanneries suffer from diseases
- The animals are treated badly occasionally
- Greenhouse gas emissions associated with animal agriculture
- Energy use and water consumption requirements of tanneries
- Groundwater near tanneries can be polluted with toxic chemicals

LEATHER WORKING GROUP

Replaces leather

Facts

Leather Working Group (LWG) is an online stakeholder group in the leather industry. This group includes brands, manufacturers, suppliers NGOs and end users. The objective for this group is to develop and maintain a protocol that assesses the environmental compliance and performance capabilities of leather manufacturers and promotes sustainable and appropriate environmental business practices within the leather industry.

Characteristics

Leather is very durable, flexible and does not tear easily

The benefits

- It is long-lasting, when cared for
- Audit protocol is focused on the environmental aspects within leather production
- Traceability all the way back to the slaughterhouses
- By-product from the food industry

The challenges

- The audit does not include a full legal compliance check with the local authorities
- It is the leather manufacturing facility's responsibility to maintain compliance throughout the certification term
- The audit is site specific and does not assess farms, animal husbandry, and transportation of animals or slaughtering practices

CACTUS LEATHER
Replaces leather

Facts
This leather is made of cactus and is vegan material. With the durability of around ten years, the cactus leather's basic features, elasticity, customizable and breathable, are similar to those of animal or synthetic leather.

Characteristics
Leather is very durable, flexible and does not tear easily.

The benefits
- Partially biodegradable
- Vegan
- No toxic chemicals, phthalates and PVC
- Cost-competitive

The challenges
- The availability is limited

ZOA™ LEATHER

Replaces leather

Facts

Zoa™ is made by fermenting yeast, which creates a collagen-like protein and can then be made into a biodegradable, leather-look material.

Characteristics

Leather is very durable, flexible and does not tear easily.

The benefits

- Biodegradable
- Vegan
- Highly adaptable

The challenges

- Not yet available commercially

MYLO™ LEATHER
Replaces leather

Facts
Mylo™ is a type of mushroom leather derived from a substance called Mycelium, which is essentially a mass of cells on root structure of mushrooms. The cells are grown in bulk, along with additional nutrients, and then compressed, tanned, and dyed to form Mylo™ leather.

Characteristics
Leather is very durable and abrasion resistant.

The benefits
- Organic material
- Vegan
- Can be produced in days
- Feels natural and has better moisture management properties
- Has the ability to biodegrade

The challenges
- The availability is limited

WET-GREEN ®

Facts

The active ingredient wet-green® OBE is recovered from the leaves of the olive tree using a method similar to brewing tea and manufactured of plants complying to the stringent demands of the food industry.

The "Original DERMATEST®" certificate awarded based on the Derma test skin compatibility test provides an assurance for consumers and manufacturers and for the traceability of test methods. Wet-green is IMO approval for tanning which permits the manufacture of leather in compliance with the IVN Natural Leather Standard, which is providing the assurance of quality to a high technical and ecological standard.

Characteristics

Leather is very durable and abrasion resistant.

The benefits

- Higher splitting yield
- Vegan
- Dry shrinkage behavior
- Many different qualities
- Feels soft like fine leather
- A by-product for the olive growers

The challenges

- The availability is limited

ACRYLIC

Replaced by Organic wool | Alpaca

Facts

Acrylic is a synthetic fiber, made from oil.

Characteristics

The technical characteristics of the fiber is very similar to wool.

The benefits

- It is a cheap alternative to wool

The challenges

- The production of acrylic involves highly toxic chemicals
- Acrylic requires more than 3.8 times more energy to produce than wool

MICROSILK™

Replaces acrylic

Facts

Microsilk™ is produced as a protein in large quantities through fermentation, using yeast, sugar, and water. Then the silk protein is isolated and purify and then spanned into fibres that looks like rayon and acrylic. These fibres are knit into fabric and garments.

Characteristics

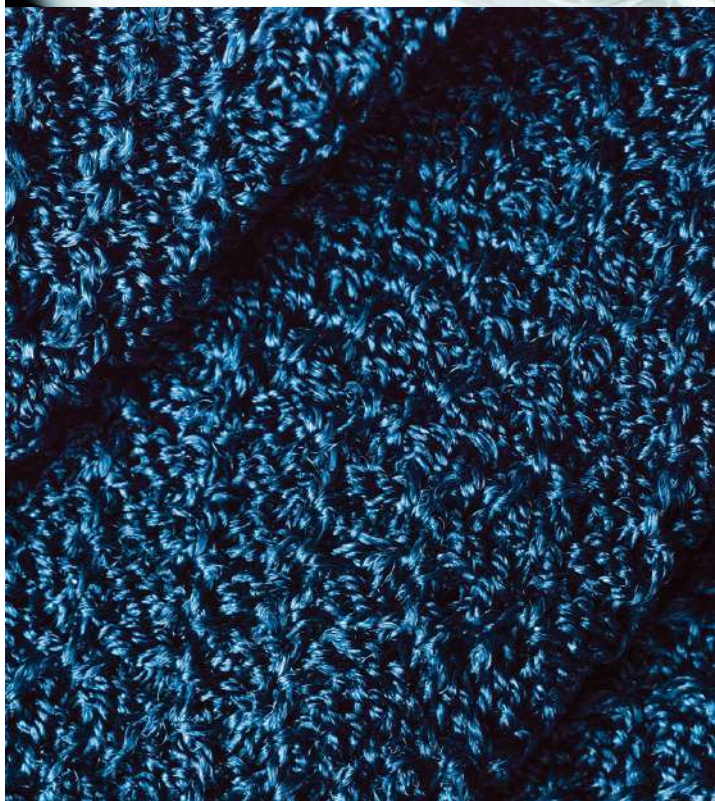
The technical characteristics of the fiber is very similar to wool.

The benefits

- High tensile strength
- Elasticity
- Durability
- Softness

The challenges

- The availability is limited



WOOL

Replaced by RWS | Organic wool | Recycled wool

Facts

Wool is an animal fibre that comes from sheep. Most of the sourced wool comes from the Merino sheep from Australia.

Characteristics

Warm, soft, durable and long-lasting and has a good ability to regulate body temperature

The benefits

- Long-lasting, when cared for in the right way
- Wool garments require less washing than other fibres, so less energy and chemicals are needed during the use phase

The challenges

- Production of wool requires huge amounts of land for grazing the sheep
- Intensive scouring process to remove lanolin plus chemically intensive process to achieve washability
- The practice of mulesing which occurs on a widely basis in Australia (removing strips of skin from a lamb's buttocks to prevent the build-up of faeces, which can attract blowflies that lay maggots)

RECYCLED WOOL

Replaces wool

Facts

Recycled wool is reclaimed from textile waste, unwanted or discarded garments.

Characteristics

Warm, soft, durable and has a good ability to regulate body temperature

The benefits

- Long-lasting, when cared for in the right way
- Wool garments require less washing than other fibres, so less energy and chemicals are needed during the use phase
- Reduces land use, waste, and soil pollution

The challenges

- Short fibers
- Pilling

RESPONSIBLE WOOL STANDARD

Replaces wool

Facts

Responsible Wool Standard (RWS) is a global
standard for animal welfare and agricultural practices in sheep farming.

Characteristics

Warm, soft, durable and long-lasting and has a good ability to regulate body temperature

The benefits

- The RWS is a tool to ensure that the wool comes from sheep,
  that have been raised with respect to the five freedoms:
  - freedom from hunger and thirst
  - freedom from discomfort
  - freedom from pain, injury or disease
  - freedom from fear and distress
  - freedom to express normal behavior

- The land has been managed responsibly
- Supply chain transparency

The challenges

- The availability
- The price of the RWS is still a bit high due to the lack of availability

CASHMERE

Replaced by alpaca

Facts

Cashmere wool comes primarily from cashmere goats in the Gobi Desert which stretches from northern China to Mongolia.

Characteristics

Soft, moisture absorption, lightweight and good insulation.

The benefits

- Long-lasting, if cared for properly
- Adds softness to the product

The challenges

- Cashmere goats are tough on the land
- They consume more than 10 percent of their body weight daily in food
- Eat very close to the roots, destroying plants
- Damage topsoil and grass root systems with their stiletto-like hoofs, which can prevent grass from re-growing. Nearly 90% of Mongolia's pastureland is vulnerable to land degradation and desertification
- The shearing of the goat causes stress

ORGANIC WOOL

Replaces wool

Facts

Organic wool comes from sheep, where animal welfare and organic farming have the focus. For organic wool, the sheep have more areas per sheep.

Characteristics

Warm, soft, durable and long-lasting and has a good ability to regulate body temperature

The benefits

- Sheep dipping is not allowed (sheep dipped in water containing insecticides and fungicide)
- Wool is only cleaned using hot water and detergent
- Sheep are usually raised freely on large green pastures, instead of being locked up in stalls
- The land has been managed responsibly
- Supply chain transparency

The challenges

- The availability is more limited than regular wool

ALPACA WOOL

Replaces wool

Facts

The Alpaca is a variety of llama. Alpacas produce one of the world's most luxurious wool fibers, which is softer than cashmere and lighter, warmer and more durable than wool.
One of the advantages of the Alpaca is that its coat exists in many natural shades ranging from off-white to black. 22 officially recognized colors.

Characteristics

Alpaca wool is extremely soft and can feel just as soft to touch as cashmere.

The benefits

- Their padded feet are gentle on the terrain and they graze without destroying root system.
- Color diverse, because of its natural variety in colors
- Long-lasting, if cared for properly
- They consume a small amount of water (compared to goats)

The challenges

- The availability is more limited

YAK WOOL

Facts

The fibre comes from the animal Yak, which is mainly found in the Himalayan region, Tibetan and some areas of Mongolia and Central Asia.

Characteristics

Warm, softness, breathability, odor-resistance, static-resistance

The benefits

- Is generally shed by the yak itself
- The softest wool of them all
- The animals will be moved from field to field to grass
- The animals do not need to be trimmed by humans

The challenges

- The availability is limited
- High prices

MOHAIR

Replaced by RMS

Facts

Mohair is a fiber or yarn made from the hair of the Angora goat.

Characteristics

The fibre is durable, naturally elastic and flame-resistant.

The benefits

- Warm in the winter because of its excellent insulating properties
- Keep cool in the summer due to its moisture-wicking properties
- Smooth fibres

The challenges

- The availability
- No control of the animal welfare

RESPONSIBLE MOHAIR STANDARD

Replaces mohair

Facts

Responsible mohair Standard (RMS) is a global standard for animal welfare and agricultural practices in goat farming.

Characteristics

Mohair fibre comes from the Angora goat. The fibre is durable, naturally elastic, and flame-resistant.

The benefits

- Warm in the winter because of its excellent insulating properties
- Keep cool in the summer due to its moisture-wicking properties
- Smooth fibres
- Control animal welfare and agricultural practices in goat farming

The challenges

- The availability
- Higher prices than other wool fibers
- Leadtime

DOWN

Replaced by conventional down

Facts

Down is a natural material that primarily comes from geese,
because goose down provides good isolation.

Characteristics

Goose down is soft, resilient and has outstanding insulating properties

The benefits

- It is a warm insulating material

The challenges

- In many cases, birds are not slaughtered for their meat before down and feathers are removed as a by-product
- Force feeding is often practiced to the geese, to make foie gras. This is a painful to the geese
- Lack of traceability

RESPONSIBLE DOWN STANDARD

Replaces down

Facts

The Responsible Down Standard, RDS, is a global standard that certify the sourcing of down, ensuring it does not come from animals that have been subject to harm, such as live-plucking or force-feeding.

Characteristics

Goose down is soft, resilient and has outstanding insulating properties

The benefits

- No live plucking
- No force feeding
- Lifelong humane treatment of waterfowl
- Traced throughout production process to final shipment
- Entire supply chain is audited by 3rd Party Certification Body

The challenges

- It is more costly than regular down

CUPRO

Replaced by peace silk

Facts

Cupro is regenerated cellulose fiber derived from cotton linter.

Characteristics

It is similar to viscose but breathes and regulates body temperature like cotton.
Often used as a silk substitute.

The benefits

- The cost is low of this fibre

The challenges

- The toxic chemicals used to manufacture the fibres.

SILK

Replaced by peace silk

Facts

Silk is a natural protein fibre produced from a silkworm. The worm is fed solely on mulberry leaves. Silkworms are caterpillars of (usually) the Bombyx mori moth.
It takes the deaths of about 2500 caterpillars to make a single pound of raw silk

Characteristics

Silk is a soft, lightweight, breathable, hypoallergenic fiber and has good absorbency

The benefits

- Long-lasting, if cared for properly

The challenges

- The process involves boiling the silkworm before the moths have emerged
- It takes the deaths of about 2500 caterpillars to make a single pound of raw silk

PEACE SILK

Replaces silk

Facts

Peace silk is a natural protein fiber produced from a silkworm. The worm is fed solely on mulberry leaves. Silkworms are caterpillars of (usually) the Bombyx mori moth.

Characteristics

Silk is a soft, lightweight, breathable, hypoallergenic fiber and has good absorbency.

The benefits

- Long-lasting, if cared for properly
- The silkworms emerge from their cocoons naturally, and die a natural death, and not boiled alive

The challenges

- The availability is limited
- The price is more costly than conventional silk

RECYCLED SILK

Replaces silk

Facts

Recycled silk is a material that has been made from recycled materials.
The most common source of recycled silk is made from pre-consumer waste.

Characteristics

Silk is a soft, lightweight, breathable, hypoallergenic fibre and has good absorbency.

The benefits

- Long-lasting, if cared for properly

The challenges

- The quality is not the same as virgin silk
- Risk of pilling is bigger
- The availability is limited

ACETATE

Replaced by NAIA™

Facts

Acetate is a chemically regenerated fibre derived from cellulose by reacting purified cellulose from wood pulp with acetic acid and acetic anhydride in the presence of sulfuric acid.
It has an appearance almost the as to silk.

Characteristics

Acetate fibres are soft and cool, have silk-like aesthetics and good drape.

The benefits

- The cost is low

The challenges

- Undergo extensive chemical processing
- The use of wood which is not from sustainable forestry


BAST FIBRES

LINEN

Replaced by Organic Linen

Facts

Linen is a natural fiber derived from the flax plant.

Characteristics

Light, breathable, naturally textured and have good strength.

The benefits

- Linen is among the strongest of the vegetable fibers, with 2 to 3 times the strength of cotton
- Flax is an excellent rotation crop and grows quickly

The challenges

- Conventional flax growing still uses fertilizers and pesticides, although less than crops like cotton
- Wastewater is damaged due to the waste of chemicals from the production

ORGANIC LINEN

Replaces Linen

Facts

Organic linen comes from plants grown without chemical pesticides or fertilizers, which makes it better for both farmers' health and the environment.

Characteristics

Light, breathable, naturally textured and have good strength.

The benefits

- It is grown without the use of any synthetic chemicals
- Retted without the use of water and chemicals

The challenges

- The availability is more limited

HEMP

Replaced by organic hemp

Facts

Industrial hemp (Cannabis Sativa L) a type of "bast fibre" which means it's a natural fibres derived, from the stems of plants such as flax, jute and stinging nettle.

Characteristics

Hemp is stronger and more durable than any other natural fabric, including linen.

The benefits

- Hemp grows and matures extremely fast and can easily grow up to 4 meters in 3 months
- Because of its weather-resistant nature, hemp can be cultivated almost anywhere in the world
- Hemp is rain based and requires only irrigation in some cases

The challenges

- Hemp plays a very small part in the textile industry
- If water retting is used, significant quantities of water are needed

ORGANIC HEMP

Replaces hemp

Facts

Organic hemp is hemp that is grown without the use of any synthetic chemicals.

Characteristics

Hemp is stronger and more durable than any other natural fabric, including linen.

The benefits

- Organic hemp grows well without the use of chemicals because it has few serious pest problems
- Hemp grows and matures extremely fast and can easily grow up to 4 meters.
- Because of its weather-resistant nature, hemp can be cultivated almost anywhere in the world
- Hemp is rain based and requires only irrigation in some cases

The challenges

- The availability is more limited than conventional
- It is more costly than conventional hemp

RAMIE

Replaced by organic linen

Facts

Ramie, known as China grass, is a natural fiber derived from the stem of China grass.
It is one of the groups, referred to as the bast fiber crops. Ramie grown for fiber production, is mainly found in China, Brazil and the Philippines.

Characteristics

It is like flax in absorbency, density and microscopic appearance.

The benefits

- No pesticides or herbicides to thrive
- One of the strongest bast fibre

The challenges

- The chemical treatment to remove the pectin's.
- Disposal of untreated wastewater into local water

ELASTANE

Inevitable fiber

Facts

Elastane is a synthetic fiber known for its exceptional elasticity.
Like polyester it is made from petroleum and is therefore non-biodegradable.

Characteristics

Very good elasticity.

The benefits

- Softness to the fibres
- High strength
- Good fit and flexibility in the styles

The challenges

- Spandex is a petroleum-based fibre
- Requires lots of energy to produce
- Not biodegradable

NOTE

Spandex and Lycra are common names for the fiber elastane.
In Europe, the correct term for the fiber is elastane. The term spandex is a common name for elastane in the USA and other countries outside of EU. It's permitted to use there as it is not a brand name. Lycra is a branded name.

ROICA™

Replaces elastane

Facts

ROICA™ is a polyurethane elastic fiber and their first fibre Roica V550 holds the cradle to cradle certification.

Characteristics

Very good elasticity, wide range of denier, is more stretchable than rubber and so is the tensile strength.

The benefits

- Cradle to cradle certified
- Certified by Textile Exchange and meeting the Global Recycled Standard, ISO 9001, ISO 14001, Oeko-Tex Standard 100
- Contains a minimum of 50% pre-industrialized recycled fibres

The challenges

- The availability may be more limited than elastane

PINEAPPLE (Piñatex)

Replaces leather

Facts

Piñatex is a leather alternative made from pineapple, produced from the leftover leaves after agriculture.

Characteristics

Strong, yet versatile, breathable, soft and flexible, material

The benefits

- The leaves are the byproduct of existing agriculture
- No additional water, fertilizers and pesticides have been used to produce this fiber, because it is a waste product
- No animal by-product is used in any stage of the production of this fibre

Common challenges

- The availability is more limited
- Control that it´s a non-food

MILK (QMILK)

Facts
Qmilk is a company that specializes in making textiles out of waste milk.

Characteristics
The fiber has the feel as silk.

The benefits
- Made of non-food milk
- The fibre is made of discarded milk
- Low resources and energy are needed for the production, with a result of almost zero waste, and CO2 emissions are minimal
- Has anti-bacterial properties

The challenges
- The availability is more limited
- Control that it´s a non-food

ORANGE (Orange Fibre)

Facts
This is a man-made cellulosic yarn made from citrus juice by-product

Characteristics
A soft and silky hand-feel, lightweight product

The benefits
- Produce a patented material from citrus juice byproducts
- Extract the citrus cellulose from the pulp
- Reduce waste as well as pollution by transforming citrus juice byproducts into a new and sustainable product.

The challenges
- The availability is limited
- Control that it´s a non-food

COFFEE (S.CAFE®)

Facts
S.cafe is a company specialized in making textiles out of excess coffee grounds.
The raw material is made from a combination of coffee and recycled polyester.

Characteristics
Strong and soft material

The benefits
- Collects used coffee ground and plastic bottles from landfills and giving it another life
- Prevents the grounds to end up in landfills
- Expanding the lifetime of the coffee by using the grounds for textile fibre

The challenges
- The availability is limited

KELP YARN – ALGIKNIT INC.

Facts

Kelp yarn is a type of seaweed or macroalgae that is grown in cold coastal waters. Kelp is one of the fastest growing organisms on earth. This seaweed absorbs the greenhouse gas carbon dioxide at a rate up to five times faster than land-based plants and improves marine habitats. By using a non-toxic wet-spinning process, this fiber is transformed into sustainable biopolymers a strong, hypoallergenic and compostable yarn.

Characteristics

Durable yet degradable

The benefits

- Natural fiber that need no landfill or water to grow
- Durable
- Practical
- Fast growing

The challenges

- The availability is limited

Sateri – Recycled Fibre FINEX™

Facts
FINEX™ is a cellulose fibre that is a mix of recycled and post-consumer textile waste, and other PEFC-certified wood pulp.

Characteristics
Soft, skin-friendly, breathable

The benefits
- Closes the loop from textile waste to new fabrics
- Wood pulp is certified
- Uses post-consumer waste
- Oeko-Tex certified, PEFC-certifed, Recycled blended claim standard

The challenges
- The availability

DO NOT USE!

ANGORA

We have decided to ban Angora, due to the bad conditions the rabbits live under.
They are subjected to severe abuse during their lifetime; they are skinned alive every three months.
Many rabbits die during the first year in captivity, but some rabbits live in cages for up to seven years in this captivity. This means that a rabbit can be ripped off 28 times during his life.

FUR

85 percent of the fur industry's skins come from animals living captive in fur factory farms.
These farms can hold thousands of animals, and their farming practices are remarkably uniform around the world.

dk company