
FABRICS
WITH
Tencel™
Feels so right
KLOPMAN
INTERNATIONAL
QUALITY THAT WORKS

NATURAL COMFORT

Klopman fabrics made with TENCEL™ Lyocell fibers deal with moisture like no other.

TENCEL™ Lyocell are cellulosic fibres of botanic origin that is defining a new standard for sustainability and natural comfort.

The fibre absorbs moisture naturally and then releases it on the outside, which creates a cooling effect.

Textiles made with TENCEL™ fibers are more absorbent than cotton, softer than silk and cooler than linen.

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BENEFITS

- A **higher moisture** absorption capacity than cotton.Derived from natural material, the microscopic fibrils of cellulosic fibers are structured to regulate the absorption and release of moisture, contributing to improved wearing comfort and the body's natural thermal regulation.

- Blended fabrics **dry quickly**, which means the wearer feels considerably cooler when the temperature rises

- **Gentle on the skin**, even to sensitive people, thanks to the fabric's smooth feel

- **Oeko-Tex® Class 1 certified**

- **Unfavorable for bacterial growth.** Through moisture management, TENCEL™ Lyocell fibers absorb moisture efficiently. In comparison to polyester and synthetics, there is less available moisture formed on the surface of the fiber for bacteria to grow. Consequently, TENCEL™ Lyocell fibers provide a less favorable environment for bacterial growth.

- **Superior tenacity** in both wet and dry conditions: the combination of polyester and TENCEL™ fibers offers enhanced durability and increases the service life of the garment

- **Extremely strong and resistant**

- TENCEL™ Lyocell fibres are **derived from sustainable wood sources**, harvested from certified and controlled sources. TENCEL™ Lyocell fibres have gained a commendable reputation for their environmentally responsible, closed loop production process, which transforms wood pulp into cellulosic fibers with high resource efficiency and low environmental impact. This solvent-spinning process recycles process water and reuses the solvent at a recovery rate of more than 99%.

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CONFIDENCE IN TEXTILES
STANDARD 100
06.0.45545 HOHENSTEIN HTTI
Tested for harmful substances.
www.oeko-tex.com/standard100

ACTIVE COOLING

In hot and humid climates, the human body regulates temperature mainly through the production and evaporation of sweat. As the sweat evaporates, it carries energy away from the body.

This is known as the latent heat of vaporisation.

The sweat must be transferred from the skin to the fabric and from here evaporate. If this doesn't happen, the body doesn't cool and physical performance suffers, in what is known as heat shock.

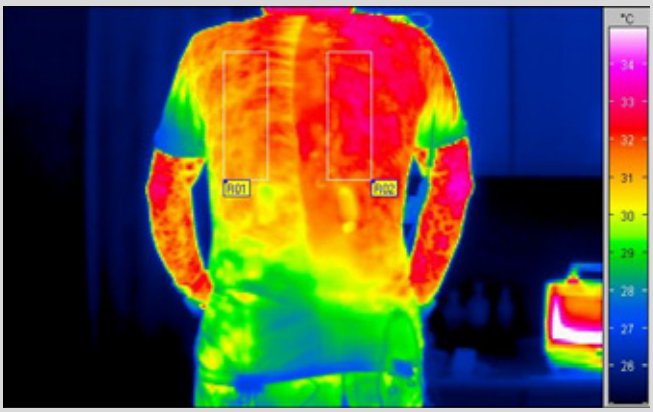
The ideal "active cooling" textile needs good water transport properties to achieve the maximum cooling effect for the human body.

To investigate the differences between the active cooling properties of TENCEL™ and polyester fibres, tests were performed with a T-shirt made in two halves: polyester on the left and TENCEL™ Lyocell on the right.

An infrared camera monitored the surface temperature of both halves

At the end of the test, the surface temperature of the fabrics made of TENCEL™ Lyocell was higher. This demonstrates the way fabrics with TENCEL™ fibres dissipates heat more effectively during high sweat production.

A temperature difference of 0.5 to 1°C may seem small, but in terms of physiological effect it is very significant.



Demonstration of the heat dissipation test: T-shirt after exercise. The temperature measured on average 31.5°C on the left side (polyester) and 32.3°C on the right side (TENCEL™ Lyocell).

FROM WOOD TO FIBRE

The workwear market demands new sustainable materials, which are environmentally responsible, made with renewable materials.

TENCEL™ Lyocell fibers are derived from sustainably grown wood, harvested from certified and controlled sources like semi-natural forests and sustainably managed plantations.

TENCEL™ Lyocell fibers have gained reputation for their environmentally responsible closed loop production process, which transforms wood pulp into cellulosic fibers with high resource efficiency and low ecological impact.

This solvent-spinning process reuses the solvent at a recovery rate of more than 99%, as well as recycling water used in the process.

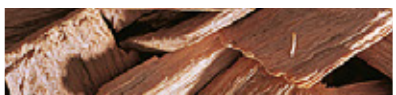
FOREST

WOOD*

PULP

YARN

KLOPMAN FABRIC WITH TENCEL™



KLOPMAN FABRICS WITH TENCEL™FIBRES: IDEAL FOR WORKWEAR APPLICATIONS

WORKWEAR

BREATHABILITY

Compared with other materials, Klopman polyester/TENCEL™ Lyocell fabrics **feel considerably cooler** when the temperature rises. This benefit can be traced to the ultra-smooth fibre surface and the high moisture buffer capacity of the fibre itself. The basic principle is that the moisture absorbed by the textile evaporates again and then the skin is automatically cooled by the cooling effect of evaporation.

MOISTURE MANAGEMENT

One of the main requirements of a workwear fabric is to absorb moisture. Klopman fabrics made with TENCEL™ Lyocell **absorb up to 50% more moisture than cotton**. Submicroscopic channels between the individual fibre fibrils enable perfect moisture management. The result is skin that remains pleasantly dry.

EASY CARE

Everyone wants professional clothing that is comfortable to wear and easy to care for. Klopman fabrics made with TENCEL™ Lyocell have **very high dimensional stability and colour performance**. They can be washed again and again and still retain their shape and colour. This strength is what gives each garment its easy-care property, and makes these fabrics particularly easy to iron.

INDUSTRIAL LAUNDERABILITY

DURABILITY

Klopman fabrics are well known in the market for their strength and tenacity. The fibre profile of TENCEL™ Lyocell perfectly meets Klopman's high standards, with the highest tenacity in a wet state. The result is professional clothing that can be washed without altering the shape or colour, **which means exceptional garment durability**.

INDUSTRIALLY LAUNDERABLE

Klopman fabrics made with TENCEL™ Lyocell can all be **washed industrially at 75°C**, maintaining its characteristics and providing excellent shrinkage performance.

MEDICAL

HYGIENE

Through moisture management, TENCEL™ Lyocell fibres absorb moisture efficiently. In comparison to polyester and synthetics, there is less available moisture formed on the surface of the fiber for bacteria to grow. Consequently, TENCEL™ Lyocell fibers provide a less favorable environment for bacterial growth.

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Klopman fabrics with TENCEL™ are all certified Oeko-Tex® Standard 100.

CATERING & HOSPITALITY

SKIN FRIENDLY

In a Klopman fabric made with TENCEL™ Lyocell, the excellent moisture management, the cooling effect and a smooth fibre surface **help to prevent skin irritations** and maintain a healthy skin balance. Compared to the fibre surfaces of cotton and wool, TENCEL™ Lyocell is much smoother and softer on the skin.





KLOPMAN´S FABRIC RANGE WITH TENCEL™ LYOCELL

Klopman's polyester/TENCEL™ Lyocell fabrics are ideal for all workwear garments that need excellent moisture management and enhanced softness and drape, without compromising durability and the capacity to withstand high-temperature industrial laundering.

This product range includes light to mid-weight fabrics in a wide range of colours, designed specifically for the healthcare, catering and hospitality sectors.

	Fabric	Weight	Blend	Finish	Weave	
	Oxford	195 g/m²	50% Lyocell (TENCEL™) - 50% Polyester	Crease resist OC1	2x1 S Twill	
	Helford	215 g/m²	50% Lyocell (TENCEL™) - 50% Polyester	Crease resist OC1	2x1 S Twill	
	Chalford	215 g/m²	65% Polyester - 35% Lyocell (TENCEL™)	Crease resist OC1	2x1 S Twill	
	Bradford	250 g/m²	50% Lyocell (TENCEL™) - 50% Polyester	Crease resist OC1	2x1 S Twill	
	Seaford	155 g/m²	50% Lyocell (TENCEL™) - 50% Polyester	Crease resist OC1	Plain	NEW
	Oxford R-PES	195 g/m²	50% Recycled Polyester - 50 % Lyocell (TENCEL™)	Crease resist OC1	2x1 S Twill	NEW
	Chalford Flex	215 g/m²	65% Polyester - 32% Lyocell (TENCEL™) 3% EOL (XLANCE)	Crease resist OC1	2x1 S Twill	NEW
	Helford R-PES	225 g/m²	50% Recycled Polyester - 50 % Lyocell (TENCEL™)	Crease resist OC1	2x1 S Twill	NEW
	Nobleford	225 g/m²	50% Lyocell (TENCEL™) - 50% Polyester	Crease resist OC1	3x1 S Twill	NEW
HIGH VISIBILITY	Luminex 10CL	270 g/m²	50% Lyocell (TENCEL™) - 50% Polyester	Crease resist	Broken twill 3X1	NEW

MIX IT WITH RECYCLED POLYESTER FOR A GREENER CHOICE

Discover our TENCEL™ Lyocell fabrics made with **recycled polyester** for an even greener choice. This new combination guarantees companies the same performance they expect from a Klopman fabric, but with stronger environmental credentials. Increased comfort, image and durability all contribute to better care for the planet and its future.

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Feels so right

X

REFIBRA™
technology

VITALYS. KLOPMAN FABRICS USING TENCEL™ X REFIBRA™ FIBRES

The pioneering REFIBRA™ technology involves upcycling cotton scraps, e.g. from garment production, in addition to wood pulp, where the raw materials are transformed to produce new virgin TENCEL™ Lyocell fibres to make fabrics and garments.

Klopman, always among the first to research and implement new sustainable solutions, embraced the project to create **the first fabric in the market using TENCEL™ x REFIBRA™ fibres.**

For more information about this advanced sustainable fabric, contact your Klopman sales representative.

Fabric	Weight	Blend	Finish	Weave
Vitalys 195	195 g/m²	50% Lyocell (TENCEL™) - 50% Recycled Polyester REFIBRA™ Technology	Crease resist OC1	2x1 S Twill
Vitalys 235	235 g/m²	50% Lyocell (TENCEL™) - 50% Recycled Polyester REFIBRA™ Technology	Crease resist OC1	2x1 S Twill

This brochure is printed on FSC certified recycled paper

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nqa ISO 9001 QUALITY MANAGEMENT

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