

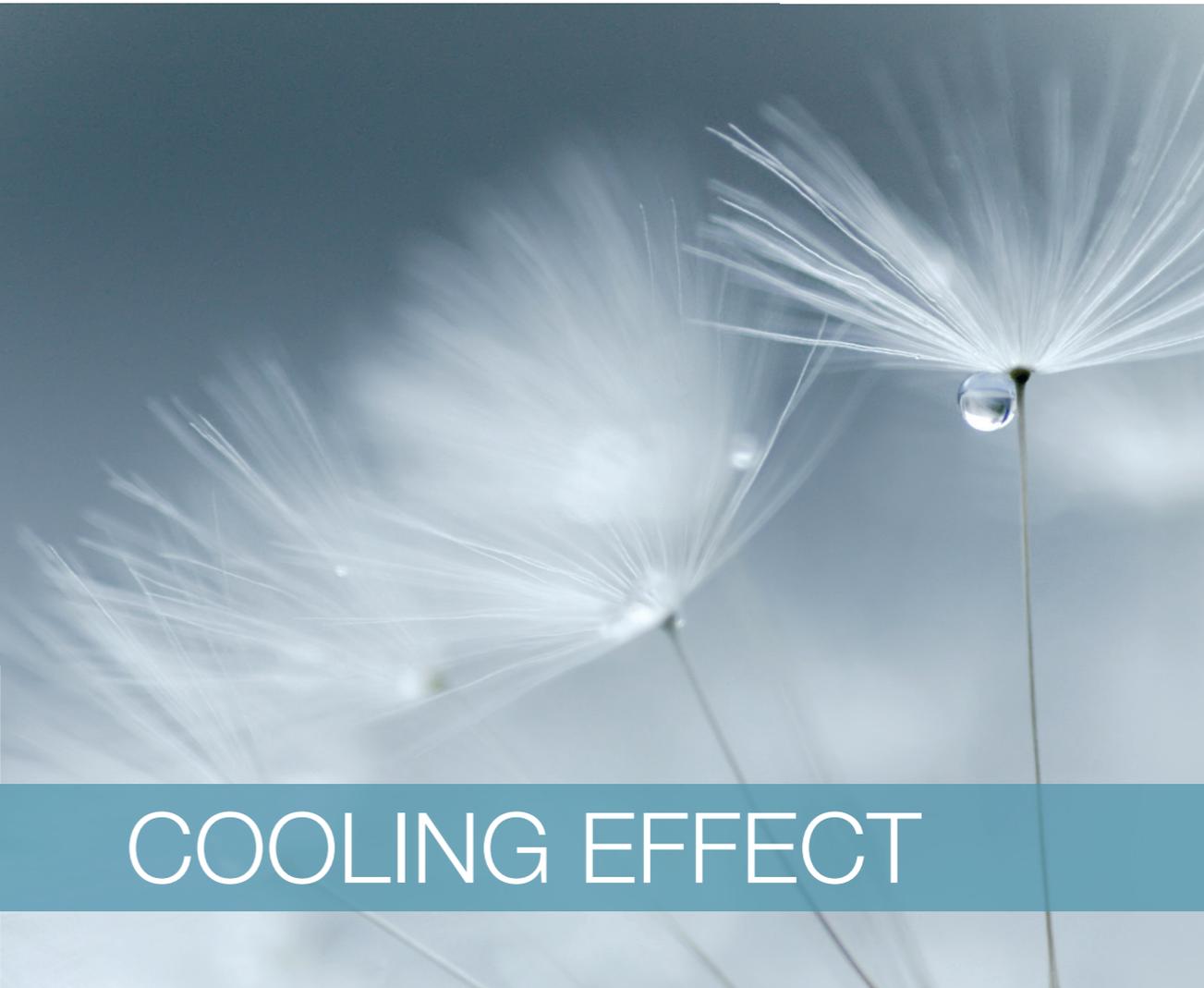


KLOPMAN FABRICS WITH TENCEL®



KL1328E 02/16

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COOLING EFFECT



For more detailed technical information
 or advice check your local
 KLOPMAN representative on
www.klopman.com/contacts/

In accordance with our policy of continuous
 product improvement, KLOPMAN International
 reserves the right to amend product design and
 specification without prior notice.





AIR CONDITIONING FOR THE SKIN.

Klopman fabrics made with TENCEL® deal with moisture like no other. The fibre absorbs moisture completely and naturally and then releases it on the outside, which creates a cooling effect. Textiles made with TENCEL® are more absorbent than cotton, softer than silk and cooler than linen.



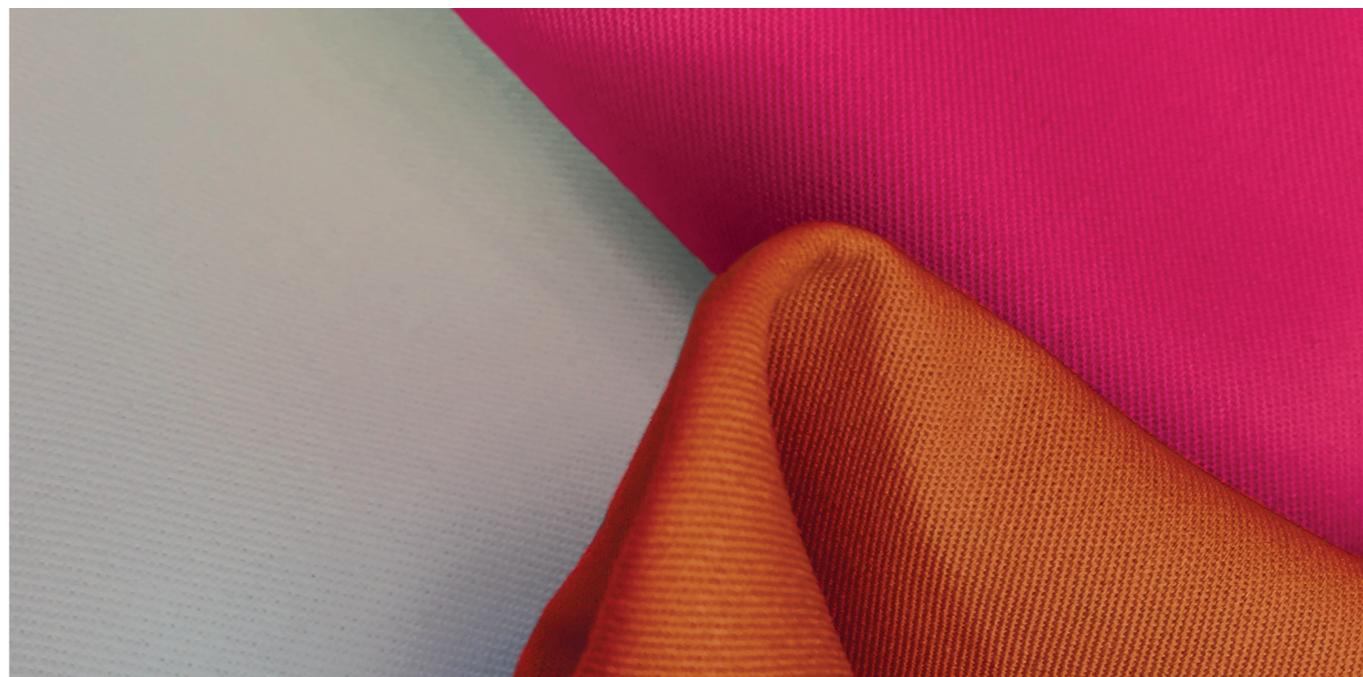
BENEFITS.

- ▶ a higher moisture absorption capacity than cotton
- ▶ blended fabrics dry quickly, which means the wearer feels considerably cooler when temperature rises
- ▶ reduces bad odours
- ▶ the fibre is much smoother and softer, making the garment more comfortable
- ▶ superior tenacity in both wet and dry conditions: the combination of polyester and TENCEL® offers enhanced durability and increases the service life of the garment.
- ▶ eco-friendly and sustainable

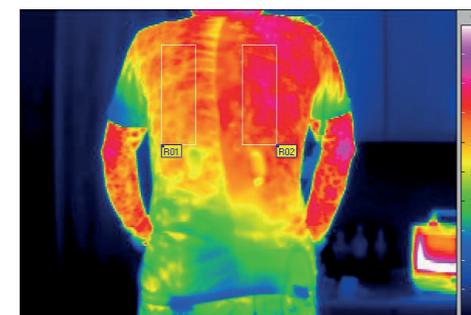


ACTIVE COOLING.

In very 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® on the right. An infrared camera monitored the surface temperature of both halves. At the end of the test the surface temperature of the TENCEL® fabric was higher. It demonstrates the way TENCEL® fabric dissipates heat better 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 are 31.5°C on the left side (polyester) and 32.3 °C on the right side (TENCEL®).

Klopman fabrics made with TENCEL® are perfect for all sorts of working areas thanks to its numerous benefits:

Workwear



BREATHABILITY

Compared with other materials, Klopman polyester/TENCEL® 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 in 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® 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® 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: these fabrics are particularly easy to iron.

Medical



HYGIENE

Perspiration is an unpleasant but inevitable side-effect of working in a high-pressure job. Klopman fabrics are all certified Oeko-Tex® Standard 100 and, in blend with TENCEL® fibres, they help to reduce bad odours without the use of chemical additives, as they create an environment that's not conducive to bacteria growth. **The moisture is directly transported away from the skin and absorbed inside the fibre.**

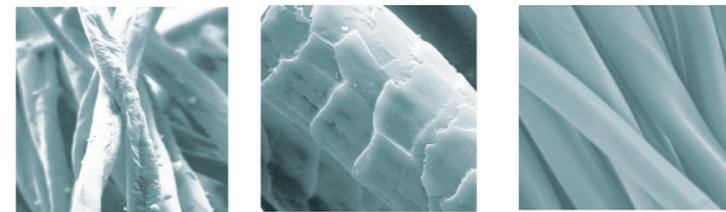
Catering & Hospitality



SKIN PROTECTION

In a Klopman fabric made with TENCEL®, the excellent **moisture management, the cooling effect and a smooth fibre surface help to prevent skin irritations and maintain a healthy skin balance.**

Rough fibre surfaces can cause skin irritations. Compared to the fibre surfaces of cotton and wool, TENCEL® is much smoother and softer on the skin.



Cotton

Wool

TENCEL®

Industrial Laundry



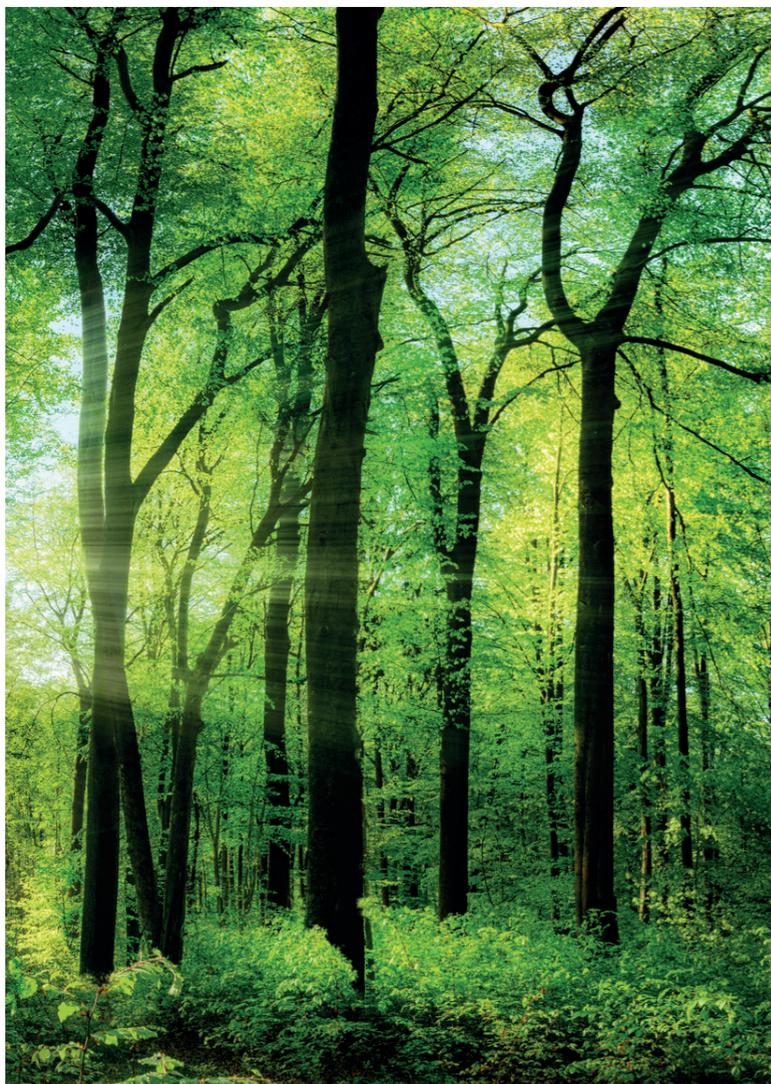
DURABILITY AND STABILITY

Klopman fabrics are well-known in the market for their strength and tenacity. The fibre profile of TENCEL® 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.**

Klopman fabrics made with TENCEL® **can all be washed industrially at 75°C** maintaining unaltered its characteristics and ensuring an excellent shrinkage performance.



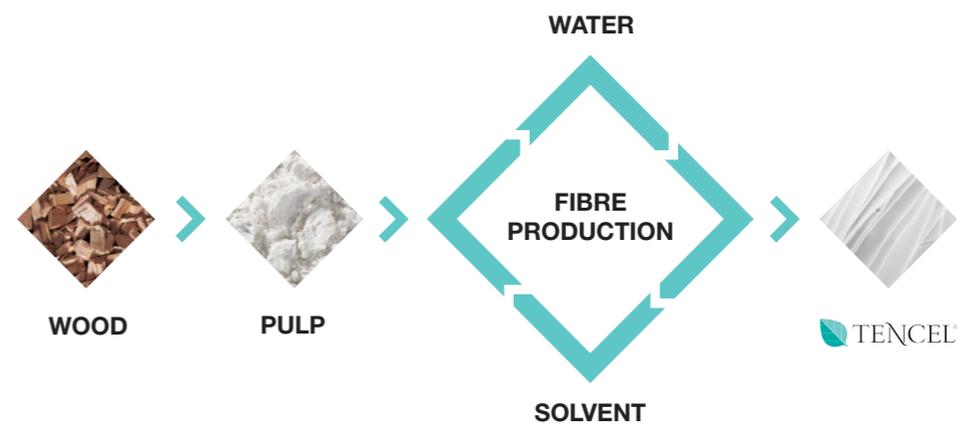
INDUSTRIALLY LAUNDERABLE

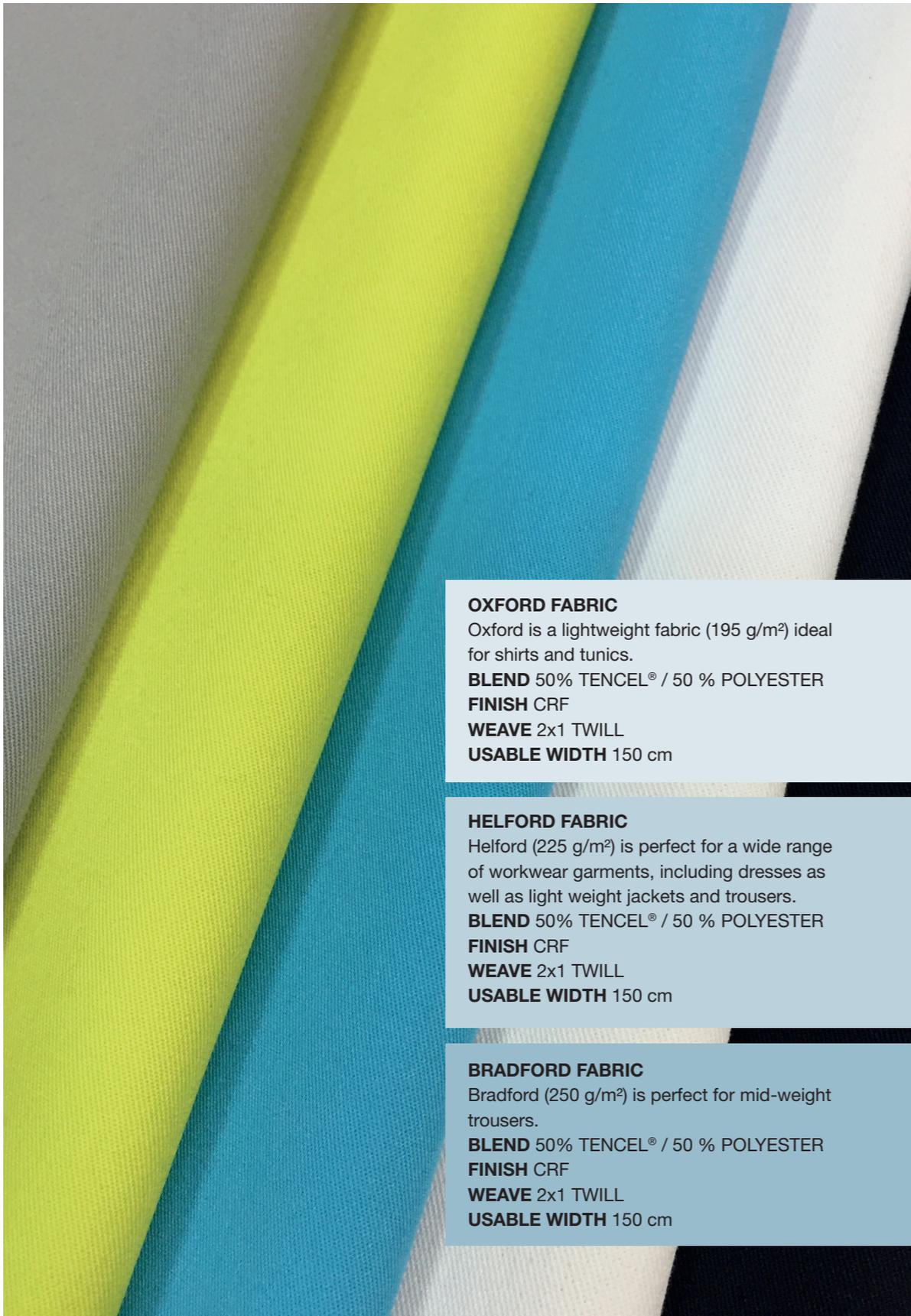


FROM WOOD TO FIBRE.

The workwear market demands new sustainable materials, which are environmentally responsible, made with renewable materials. TENCEL® is a functional fibre with a natural origin, extracted from wood.

The fibre production itself is extremely eco-friendly, due to the closed loop system of solvents. TENCEL® is a new generation of lyocell fibres made from the wood pulp of Eucalyptus trees. The fibres are environmentally friendly, based on the recycling and reuse of chemicals from the production process, an economical use of energy and water, and FSC systems that ensure all wood comes from sustainable forests.





OXFORD FABRIC

Oxford is a lightweight fabric (195 g/m²) ideal for shirts and tunics.

BLEND 50% TENCEL® / 50 % POLYESTER

FINISH CRF

WEAVE 2x1 TWILL

USABLE WIDTH 150 cm

HELFDOR FABRIC

Helford (225 g/m²) is perfect for a wide range of workwear garments, including dresses as well as light weight jackets and trousers.

BLEND 50% TENCEL® / 50 % POLYESTER

FINISH CRF

WEAVE 2x1 TWILL

USABLE WIDTH 150 cm

BRADFORD FABRIC

Bradford (250 g/m²) is perfect for mid-weight trousers.

BLEND 50% TENCEL® / 50 % POLYESTER

FINISH CRF

WEAVE 2x1 TWILL

USABLE WIDTH 150 cm

KLOPMAN'S FABRIC RANGE WITH TENCEL®

Klopman's polyester/TENCEL® fabrics are ideal for all workwear garments that need excellent moisture management, 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.

			Oxford CRF	Helford CRF	Bradford CRF
	Blue Shadow	471001 SPEC	✓	✓	✓
	Chocolate Brown	231070 SPEC	✓	✓	✓
	(R*) Magic Azur	613102 LT	✓	✓	
	Navy	501018 NVY		✓	
	New Black	901047 SPEC	✓	✓	✓
	Pale Grey	924001 LT		✓	
	(R*) Shocking Pink	362001 STD	✓	✓	
	Vert Anis	853003 LT	✓	✓	
	Virtual Grey	914018 LT	✓	✓	✓
	Warm Orange	161015 STD	✓	✓	
	White	000020 WHT	✓	✓	✓