
Plant Fibre Blends.
From field to fabric.
We're creating a
new generation of
natural fibre textiles.
Made from pure
new wool blended
with harvested
hemp and flax.
camira



Our vision is to be the natural choice for fabric solutions worldwide – quite literally. So we always look to nature to provide the best answers.

Nature teaches us so much in terms of rapid renewability, biodegradability, perfect fit for purpose and, of course, beauty.

Camira are pioneering designers and manufacturers of plant fibre fabrics made from innovative blends of pure new wool combined with naturally occurring textile fibres derived from harvested nettles, hemp and flax. The fibres are found in the outer part of the stem of the plant, just inside the bark, making them strong, elastic and flexible, so ideal characteristics for spinning into yarn and weaving into fabric.

It all started with Sting: an acronym for a four year project titled “Sustainable Technology in Nettle Growing” and the name of our award winning upholstery fabric.

Back in 2005, we teamed up with academic partner De Montfort University in Leicester, UK, and led the way in developing an industry-first fabric made from wool and nettle fibre obtained from the common stinging nettle. The project encompassed research into nettle cultivation on UK farmland; harvesting methods and fibre extraction; blending, spinning, weaving and dyeing; technical performance evaluation and lifecycle assessment. The entire learning process has since informed the development of a totally new category of natural plant fibre fabrics.

Nettle facts and trivia:

- Nettles grow rapidly from springtime onwards, up to a height of 2.5 metres
- They grow easily on land which is often unsuitable for arable crops
- They don’t require pesticides or herbicides
- The fibre is extracted mechanically through a process known as decortication
- The woody remnant after fibre extraction is used as animal bedding
- Nettle cultivation encourages bio-diversity, providing a natural habitat for birds and insects
- Nettles are known for their medicinal and healing properties, are used in soaps and shampoo, or as flavourings in wine, tea, soup and beer



No you're not seeing things. We really do make fabrics from the raw material which is more associated with recreational drugs and medicines.

From nettles, we quickly progressed to making fabrics from wool and hemp which is grown as an agricultural crop under licence from the UK government Home Office on Huit Farm in Leicestershire. Hemp is sown from seed - rather than planting nettle cuttings – and benefits from an even faster sowing to harvest cycle. After harvesting, the long stems are left in bundles in the fields, while their leaves decompose and act as fertiliser for the following year. Dew retting starts the process of fibre separation, which is completed by mechanical decortication. Blended with wool in a 60% wool 40% hemp mix, the end fabrics come in a dizzy array of intoxicating colours and patterns.

Hemp facts and trivia:

- The hemp we grow is the Cannabis sativa strain containing only minute amounts of the psychoactive substance THC
- It's one of the fastest biomasses known, reaching over three metres in just 120 days
- We plant 45kg of seed for every hectare, generating 6 tonnes of hemp straw, which in turn yields 1 tonne of textile fibre
- In a 60% wool, 40% hemp blend, 1 tonne of fibre is enough to make 5,400 metres of fabric
- Hemp's myriad uses include fuel, plastics, construction, cosmetics, medicines, paper and fabric
- Hemp fibres are soft, long and so strong they were used in sails, ropes and sailors' uniforms during the time of the British Empire



A symbol of purity, the magic of flax has been woven into human history as one of the oldest cultivated plants - grown for both its textile fibres and its nutritional seeds.

Like hemp, flax is an annual plant, which is sown from seed and lives for one season before harvesting. It grows to about a metre in height, with attractive pale blue flowers, flourishing in northern temperate latitudes, where moderately moist summers yield soft, silky flax. At harvesting, the stems of the plant are pulled up by the root rather than cut at the base, which preserves the fibre length and retains moisture. Baling, decortication and blending produce beautifully soft textile yarns for woven upholstery fabrics and are incorporated into our 24/7 Flax, Craggan Flax, Main Line Flax, Main Line Twist, Monochrome Sett, ReSKU 2.0 and Silk ranges.

Flax facts and trivia:

- Flax fibres, seeds and shives are all used in a variety of products. In fact, the Latin name for flax is “Linum Usitatissimum” which literally means “most useful”
- It’s from the Latin that we get “linen” – the common term for flax fibre – which in turn gives us “line” and “lingerie”! The seeds give us linseed oil and the oil gives us linoleum or lino
- If the world’s flax fields were replaced with cotton, water usage would increase by 650 billion m^3 and CO_2 emissions would increase by 450,000 tonnes (source: European Commission Audit 2007)
- The earliest evidence of flax being used in textiles is dated as far back as 30,000 years ago
- Ancient Egyptians considered flax a symbol of purity and light. They called it “woven moonlight” and entombed their mummies in linen

Our textiles are carefully manufactured to protect both our environment and our customers; that is why so many of our ranges have been awarded the SCS Indoor Advantage™ Gold certificate.

Certifying compliance with rigorous indoor air quality emissions requirements, the accreditation demonstrates our commitment to creating healthy interiors and low-emitting products of volatile organic compounds (VOCs), with over 25 of our ranges receiving the certification, including all our plant fibre fabrics.

What are VOCs?

VOCs are organic chemicals which evaporate or vaporize readily under normal atmospheric conditions and are harmful to human health. They typically have a low boiling point which causes large numbers of molecules to evaporate and enter the surrounding air. One example is formaldehyde, which has a boiling point of –2°F and will steadily evaporate unless it is kept in a closed container. VOCs significantly affect the air quality of our interiors, causing indoor air pollution.

Indoor air quality facts and trivia

- The Environmental Protection Agency has consistently ranked indoor air pollution as one of the most concerning environmental dangers we all face daily
- It has been estimated that indoor levels of air pollutants are two to five times higher than outdoor levels
- There are number of day-to-day events that can cause VOC-based pollution, such as using air fresheners, specialised cleaning sprays and painting a room. Increasing the amount of fresh air in your interior space will help reduce the concentration of VOCs indoors
- Breathing VOCs can irritate the eyes, nose, throat and skin. Health effects are usually temporary and alleviated once the source of the emissions has been removed, although long term exposure to certain VOCs can have more severe side-effects
- Specifying product ranges accredited with the SCS Indoor Advantage™ Gold certificate can contribute to meeting major environmental building standards, such as: LEED v4, Well Building Standard, and BREEAM UK.



Nature’s ultra intelligent fibre is one that needs no introduction. It’s the perfect accompaniment to our natural plant fibre blends.

Having our own wool yarn spinning facility means that we’ve been able to fine-tune our innovative new yarn blends to develop optimum fibre ratios. These impart the individual characteristics of plant fibres, yet retain the unique performance credentials of wool. Wool’s smart abilities are well documented: it retains its beautiful appearance for longer; it has natural crimp, stretch, drape and handle; it is a breathable fibre which can absorb and evaporate moisture; and in fire situations it is difficult to ignite and forms a char against flaming. It’s this ability which is enhanced further still in wool-plant fibre blends and warrants its own full page spread overleaf.

Wool facts and trivia:

- The average sheep’s fleece produces about 4 kg of fibre, which can make up to 10 metres of fabric. It will go even further when mixed into plant fibre blends
- In the beginning, textile fibres were all derived from natural sources such as wool and plants, but polyester consumption is now thirty times greater than wool, and sheep numbers have halved in the last 20 years
- Wool is made from the structural protein keratin, which is the same as human hair – and we all know the beautiful colour effects achievable as it absorbs colour to its very core
- Wool will easily biodegrade within one year whereas synthetic fibres, such as polyester, take hundreds of years to decompose
- Sheep are actually one of the 12 animals in the Chinese zodiac and are known as yáng. The year of the sheep is often thought to bring prosperity and promise



Our wool-plant fibre blends are as safe as houses. They all meet Crib 5 Medium Hazard flammability. Inherently. Naturally.

Out of all the technical standards that fabrics have to meet, we'd always argue that flammability performance is the most important due to its crucial safety implications in the event of a fire. The really clever thing about wool-plant fibre fabrics is that in combination they enhance the natural flame retardancy of wool by helping form a stronger char, which acts as a barrier between the flame and the foam. It's the foam which can add fuel to the fire and also give off toxic fumes. Wool-plant fibre fabrics don't need any chemical treatments or backcoating. They're just a safe, reliable method of meeting the main UK contract flammability standard, BS 7176 Medium Hazard (Crib 5) to provide better fire security for commercial interiors and public spaces.

Flammability facts and trivia:

- BS 7176 is a performance standard based on BS 5852 in which there are eight ignition sources. The most frequently quoted are Ignition Source 0 (cigarette), Ignition Source 1 (match) and Ignition Source 5 (Crib 5)
- Crib 5 is a 5 tier high wooden crib structure, originally intended to mimic a rolled up newspaper which catches fire on a chair
- The heat produced from the wooden crib is 16 times more intense than a match
- For a flammability pass to be recorded, all flaming must cease within 10 minutes and the foam cannot be burnt through its full thickness
- BS 7176 identifies "Hazard" categories linked directly to the combination of different ignition sources used in the flammability test
- Typical end-use examples for Medium Hazard fabrics include public buildings, hotel bedrooms, restaurants, places of public entertainment, hospitals and hostels

We've sown the seeds and they've bloomed into a complete range of innovative plant fibre fabrics, all with inherent flame retardancy. So which is your favourite?

Hemp, flax and wool. Even silk to add a touch of heightened luxury. These natural ingredients have been blended to perfection by our design and technical teams. They don't contain any nasties and they cater for a broad menu of tastes, furniture styles and price points in offices, education, hospitality and other contract environments. Inspiration stretches from the beautiful but bleak Yorkshire moorlands to the cultural textiles of nomadic tribes. Serve them up individually or get creative and work them in combo to create the ultimate environmental scheme.

Fabric	Composition	Colours	Indoor Air Quality	Abrasion* (10 year guarantee of wearability)	Flammability
24/7 Flax	54% Polyamide, 35% Wool, 11% Flax	16	✓	>200,000 Martindale cycles	BS 7176 Medium Hazard
Craggan Flax	85% Wool, 10% Flax 5% Polyamide	15	✓	>50,000 Martindale cycles	BS 7176 Medium Hazard
Hemp	70% Virgin Wool, 30% Hemp	21	✓	>50,000 Martindale cycles	BS 7176 Medium Hazard
Main Line Flax	75% Virgin Wool, 25% Flax	57	✓	>50,000 Martindale cycles	BS 7176 Medium Hazard
Main Line Twist	75% Virgin Wool, 25% Flax	15	✓	>50,000 Martindale cycles	BS 7176 Medium Hazard
Monochrome Sett	75% Virgin Wool, 25% Flax	12	✓	>50,000 Martindale cycles	BS 7176 Medium Hazard
Monochrome Sett II	75% Virgin Wool, 25% Flax	10	✓	>50,000 Martindale cycles	BS 7176 Medium Hazard
ReSKU 2.0	66% Recycled Wool, 21% Flax, 13% Recycled Polyamide	24	✓	>100,000 Martindale cycles	BS 7176 Medium Hazard
Silk	70% Wool, 19% Flax, 11% Silk	17	✓	>50,000 Martindale cycles	BS 7176 Medium Hazard

*Why go round in circles with numbers? Camira recognise that the number of Martindale cycles does not reflect the actual wear performance of fabrics. We're so confident in the durability of our products that we provide a robust 10 year guarantee (full details available). These ranges are externally certified, details of which are on our website and available from our customer services team.







Top
Monochrome Sett - A stylish 75/25 wool flax blend fabric designed to coordinate with Main Line Flax

Middle Right
Silk - Luxuriously soft fabric made from a blend of silk, flax and wool

Left
Main Line Twist - tweed effect fabric in a 75/25 wool flax blend



Get in touch

Will you turn over a new leaf and specify rapidly renewable plant fibre fabrics? You can get your hands on them by contacting us online or in person.

www.camirafabrics.com

