

IN SEARCH OF INNOVATION AND OF SUSTAINABLE DEVELOPMENT

Fabric innovation is in full swing. Elastomultiester, recycled polyamide and polyester, cupro... currently have the wind in their sails and are taking the same route that was first opened up by elastane.

After a few years of teaching, risk-free lingerie articles now appear to be the cornerstone of Sustainable Development.

**LA
FEDERATION**
de la maille & de la lingerie

Interfilère
PARIS

Case Study



RECYCLING IS THE CORE FIBRE

The appearance of recycled synthetic yarn is an emerging trend but one that is already well implanted: at the 24 Interfilière exhibitors who were surveyed, 25% of them already offer products made from recycled raw materials.

The main advantage of this type of yarn is that the natural resources of the planet are no longer used and in particular fossil resources (derived from crude oil). The manufacturing process is thereby simplified since the raw material (waste plastic) is already polymerised, resulting in a considerable reduction in energy, CO₂ emissions and water.

Manufacturers have developed several processes for creating recycled polyester and polyamide from plastic waste.

Teijin Fibers Limited uses a recycling system called EcoCircle Fibers® which allows polyester yarn to be recycled. Teijin claims an 80% reduction in energy consumption and CO₂ emissions compared to traditional processes for a yarn of equivalent quality.

Nilit® offers an equivalent mechanism for recycled 6-6 polyamide called Nilit® EcoCare, which they claim reduces energy consumption by 87,6%. Chanty Lace (stand K31) uses it to manufacture laces known as EcoLace.

Liebaert (stand C14-D13) manufactures tulle with the Econyl® by Aquafil, a polyamide of which 70% comes from recycling the group's production waste.

Wu Tong Lace (stand L37) offers laces made up from over 50% recycled polyester and polyamide yarn, provided by FCFC (Formosa Chemicals & Fibre Corporation).

LIGHTING

Saburo Mukai, Global Marketing Manager, ASAHI KASEI FIBERS CORP., a business specialised in materials innovations for applications in clothing and in industry.

WHAT THREADS DO YOU OFFER FOR THE LINGERIE SECTOR?

Essentially we offer two types of product: elastane distributed under the Roica® brand as well as artificial fibres such as A Touch of Nature Cupro®.

WHAT ACTIONS DO YOU TAKE IN TERMS OF SUSTAINABLE DEVELOPMENT?

We want to reduce the environmental impact caused by the production of our fibres. Our production sites are therefore constantly evolving to consume less energy and to generate less waste. They are ISO 14001 certified; this means we have to adopt an approach to environmental management that is subject to continuous improvement.

IN CONCRETE TERMS HOW EFFECTIVE ARE THESE ACTIONS?

As far as energy is concerned, we reduced our consumption by 10% between 2001 and 2007 at our Japanese sites. As far as our recycling policy goes, we recycle 99.7%.

AND HOW DO YOU REDUCE THE ENVIRONMENTAL IMPACT OF YOUR PRODUCTS?

A simple example: cupro is produced from cotton linters. These fibres surround the cotton seed but are too short to be used in traditional cotton spinning. We use this spinning waste as raw material to manufacture the artificial cupro fibre which is certified Oeko-Tex 100.

NB: The latest BeBe Cotton Knitting collection includes new products with a cupro mix from Asahi Kasei (stand C6).

Tianhai Lace (stand J36-K35) also offers laces made from recycled polyester and polyamide.

Yarn manufacturers are beginning to structure their supply chains in partnership with their clients in order to facilitate recovery of the sources of raw materials. Unifi offers Repreve®, a polyester and polyamide yarn that is recycled using the waste from clothing industry and from worn-out garments recovered by their distribution partners.

Yarn recycling is not confined to synthetic fibres; recycled cotton also exists! The spinner Otto offers a thread called Recot2® used in particular by the company Chanty Lace (stand K31). The aim is to achieve a significant reduction in the consumption of water and pesticides that arises from cotton growing. Otto salvages cotton waste at the spinning and weaving stages.



TESTIMONIAL

Isabelle Phang,

Manager for France,

BE BE COTTON KNITTING

(stand C6)

COULD YOU INTRODUCE US TO YOUR COMPANY AND EXPLAIN YOUR CONTRIBUTION TO THE LINGERIE SECTOR?

As a textile developer, BeBe Cotton Knitting innovates by creating fabrics that are ever more comfortable and functional. In our collections, we offer products that reflect the underlying trends in lingerie and underwear: delicate, light and fine... always taking care to ensure our products respect the environment.

IN PRACTICAL TERMS, WHAT ENVIRONMENTAL BENEFITS DO YOUR PRODUCTS BRING?

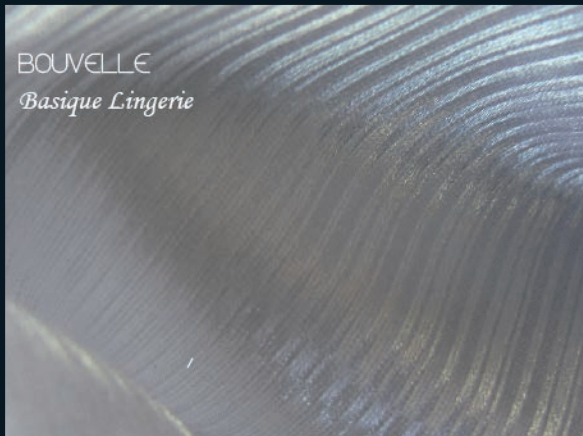
We meet all our clients' expectations in terms of fibres that respect the environment: organic cotton, naturally dyed cotton, cupro mixes and fabrics dyed with natural dyes are the current must-haves.

CAN YOU TELL US A BIT MORE ABOUT THIS?

In 2006 we launched the SENSE programme (Sensual Environment Nature Save Ecology). To be more specific, we have developed industrial finishing techniques of natural vegetable origin with the help of plants

such as garcinia leaves, pomegranate and madder root.

We also offer naturally dyed cotton. It therefore does not need to be dyed, which reduces water and energy consumption and greenhouse gas emissions. Experience shows that between 45 and 180 litres of water are required to dye 1kg of fabric...



TOWARDS HARMLESS PRODUCTS

Given the growing number allergy problems and skin/respiratory irritations, today's consumers are very aware of the harmlessness and the security of the clothes they buy and wear. This is even truer for items of lingerie which, by their nature, are in direct and prolonged contact with the skin. Thus, the health of consumers occupies a predominant place in our society and is a major issue for all clothing brands, including lingerie.

The initiatives destined to ensure security have multiplied and taken on a range of forms: regulations, standards, quality labels... In the light of this, the European Union has put in place «drastic» legislation, known as REACH, which concerns all chemical substances that are likely to be used in Europe. It should be noted that there are no equivalent regulations or mechanisms as detailed or complete in other non-European countries.

In the textile/clothing sector, numerous substances are considered as potentially harmful to the health of consumers: azo dyes, allergenic and carcinogenic dyes, formaldehyde, pentachlorophenol (PCP), heavy metals (nickel, cadmium, chrome VI...), phthalates, cadmium, dimethylfumarate (DMFu)... Some of these are subject to restrictions, or even prohibited, under the REACH regulation, and others can be considered as potentially dangerous in respect of the general safety requirement. It should be noted that not all of these substances are present in lingerie products.

THE HIDDEN FACES OF TOXICITY

THROUGH RAW MATERIALS AND COMPONENTS

Some fibres absorb harmful substances and retain them throughout the manufacturing process. Accessories can also contain toxic substances. In this way, certain «undesirable» substances can make their way into the finished product.

THROUGH TREATMENTS

Several chemical substances are used during the manufacture of a product, primarily at the finishing stage (dyeing, printing, finishing...) where the main aim is to add value to the finished product. But some of these substances can have “harmful” effects on the health of consumers, in particular when the product is in direct contact with the skin.

BEHIND THE SCENES, HARMLESSNESS IS GETTING ORGANISED

Regulation

Certain high-risk chemical substances have been regulated by European legislators, and sometimes even by national legislators, in order to impose obligations on the profession that are destined to protect the consumer.

REACH

At a European level, all the existing texts relating to the manufacture or use of chemical substances has been integrated into the **REACH regulation**. The existence and the application of this regulation means that quasi totality of products manufactured from European raw materials and/or sold on European territory are safe products for the health of consumers.

GENERAL SAFETY OBLIGATION

Because it is impossible to provide regulations for every product on the market, European authorities have decided to develop horizontal legislation: **Directive 2001/95** which lays down a **general safety requirement** for all consumer products.

When there is a specific regulation, the directive on the general safety obligation still applies, as a backdrop, to complete the measures of that particular text.

RESPONSIBLE FOR RESPECTING REGULATIONS

Given that the aim of the toxicity obligations put in place is to protect the consumer, the first in line for the controls and sanctions provided for by the texts are the distributors or retailers. The latter can still seek recourse against their suppliers, who in turn can refer to their own suppliers and so on until the real actor responsible for non-conformity is identified (for example, the finisher in the case of regulation on azo dyes).

Those in charge of bringing the product to market (manufacturers, importers and distributors), must put “safe” products on the market and they are under the obligation to ensure that their merchandise meets the requirements of the legislation in force.

REACH (Registration, Evaluation, Authorisation and restriction of Chemicals)

The REACH regulations were voted in December 2006 and came into force in June 2007. The system put in place by REACH has no equivalent in other parts of the world!

One of the main aims of REACH is to ensure a high level of protection of human health and the environment, by improving our knowledge of the intrinsic qualities of chemical substances and of the risks associated with their use. This regulation is based on the registration of all manufactured or imported chemical substances over one tonne per year, and on a system of authorisation for very high concerned substances. The text also lists all the restrictions, some of which are specific to the textile-clothing sector, such as azo dyes, nickel... The chemical substances contained in the articles are also taken into account, with, under certain circumstances, the obligation to inform. In this way, as soon as a textile article contains a very high substance on the list, at a concentration higher than 0.1% of its mass, the manufacturer or distributor must inform his client and any consumer who requests the information (within 45 days of the receipt of the request). He must then give, as a minimum, the name of the substance as well as any precautions regarding use.

Standards

Regulations should be distinguished from standards. The latter emanate not from legislative bodies but from standardisation bodies set up for this purpose. As a general rule, standards are not mandatory: their application comes about either as a result of the manufacturer's choice or of the client's request. In certain cases, for reasons of public health, or security, or environmental conservation, authorities can impose a standard that was originally voluntary.

Labels

Labels are above all voluntary signs of quality. Their vocation is of a commercial nature and aims to ensure and facilitate recognition of certain characteristics of the product.

Concerning toxicity, labels allow manufacturers to assert their desire to comply with all regulations relating to consumer health, as they are based at a minimum (in the specification) on the regulatory requirements in force in Europe. In general, quality marks often go beyond the rules and regulations that apply to a given product.

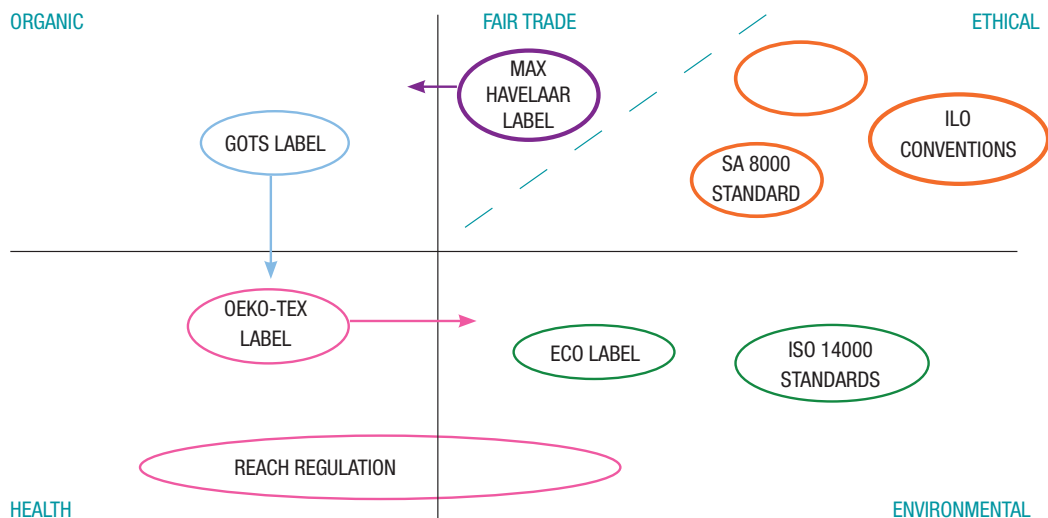
There are numerous labels, but in terms of toxicity and consumer health, the Oeko-Tex mark is the most established in Europe, although it is not well known by the end consumer. It is appreciated in the lingerie sector, as it includes specific requirements for products in direct contact with the skin.

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THE NETWORK OF MAJOR QUALITY MARKS, STANDARDS AND REGULATIONS



A HUGE THANK YOU TO THE BUSINESSES WHICH COLLABORATED ON THIS FILE AND IN THIS FORUM

ALGE ELASTIC (A22-B21)

www.algeelastic.at

ASAHI KASEI

www.asahi-kasei.co.jp

BE BE COTTON KNITTING (C6)

www.chantylace.com

CHARMING FABRICS (C4-D5)

www.charmingfabrics.com

CHEYNET ELASTICS (C28-D27)

www.cheynet.fr

CODENTEL (L31)

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ESTAR TEKSTIL SAN TIC (C36)

EUROJERSEY SPA (B10-C9)

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FORSTER-ROHNER (F32-G31)

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ILUNA GROUP (G36-H35)

www.iluna.com

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www.tissages-perrin.com

LIEBAERT (C14-D13)

www.liebaert.com

LOUIS VIDON (C28-D27)

www.cheynet.fr

MG CREATION (A18-B17)

www.mgcreation.com

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NOYON DENTELLE (G32-H31)

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PAPILLON RIBBON & BOW (C27)

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PROTECHNIC (J30)

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ROCLE BY ISABELLA - RBX (B19)

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www.tessiturarossi.it

TIANHAI LACE CO (J36-K35)

www.gztianhai.com

WILLY HERMANN (B16-C15)

www.willy-hermann.com

WU TONG INDUSTRIAL CO. (L37)

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