



TREVIRA CS  
and PARTNERS

*Book of Green Ideas*



Shaping the textile future:

*Operating in a sustainable way.  
Accepting responsibility.  
Achieving success together.*



This publication was printed on chlorine-free bleached paper from sustainable forestry. It was produced with oil-free inks, alcohol-reduced dampening water and with the use of printing plates exposed chemical-free in a climate-neutral environment.





# Preface

Sustainability is one of the great issues of our time, and one that concerns us all.

As an industrial enterprise, we are conscious of our particular responsibility to maintain an intact environment and to make sparing use of resources. Long before climate change became the focus of global attention, we started to work on continually improving our processes, with the aim of creating products that are kind to the environment with regard to their manufacture and their applications. In the process we do not only examine our own activity and our own products, we also consider the environmental impact of the raw materials, auxiliaries and services we require for the production of our polyester fibres and yarns, but we also look at what happens to them in further stages of processing. We work closely with our customers and partners in the textile supply chain when we do this and so are able to create textiles that both meet the highest design and quality standards and also satisfy the expectations of users in terms of ecology. This applies especially to our premium brand Trevira CS and to the high-value collections of our customers, which are available both to the contract market and the private consumer.

With this publication we would like to show how it is possible to create sustainable products when responsibly acting partners collaborate. You will learn something about the Trevira company, the Trevira CS brand and about some of the premium suppliers of flame retardant Trevira CS textiles. These are incidentally textile editors and wholesalers of the Trevira CS Gold and Silver Club, who among other things distinguish themselves with their special creativity and international orientation. Working together, we have compiled this informative book to provide interior furnishers, architects and other interested parties with some insight into the Trevira CS concept from the ecological point of view. With the details on the suppliers we also demonstrate the variety of the collections and their design strengths. They are able to meet on a worldwide basis any wishes with regard to design and provide a fitting – and sustainable – solution to all trends.

We hope you will gain some stimulus for your coming projects from this publication and that you enjoy reading it.

*Anke Vollenbröker*

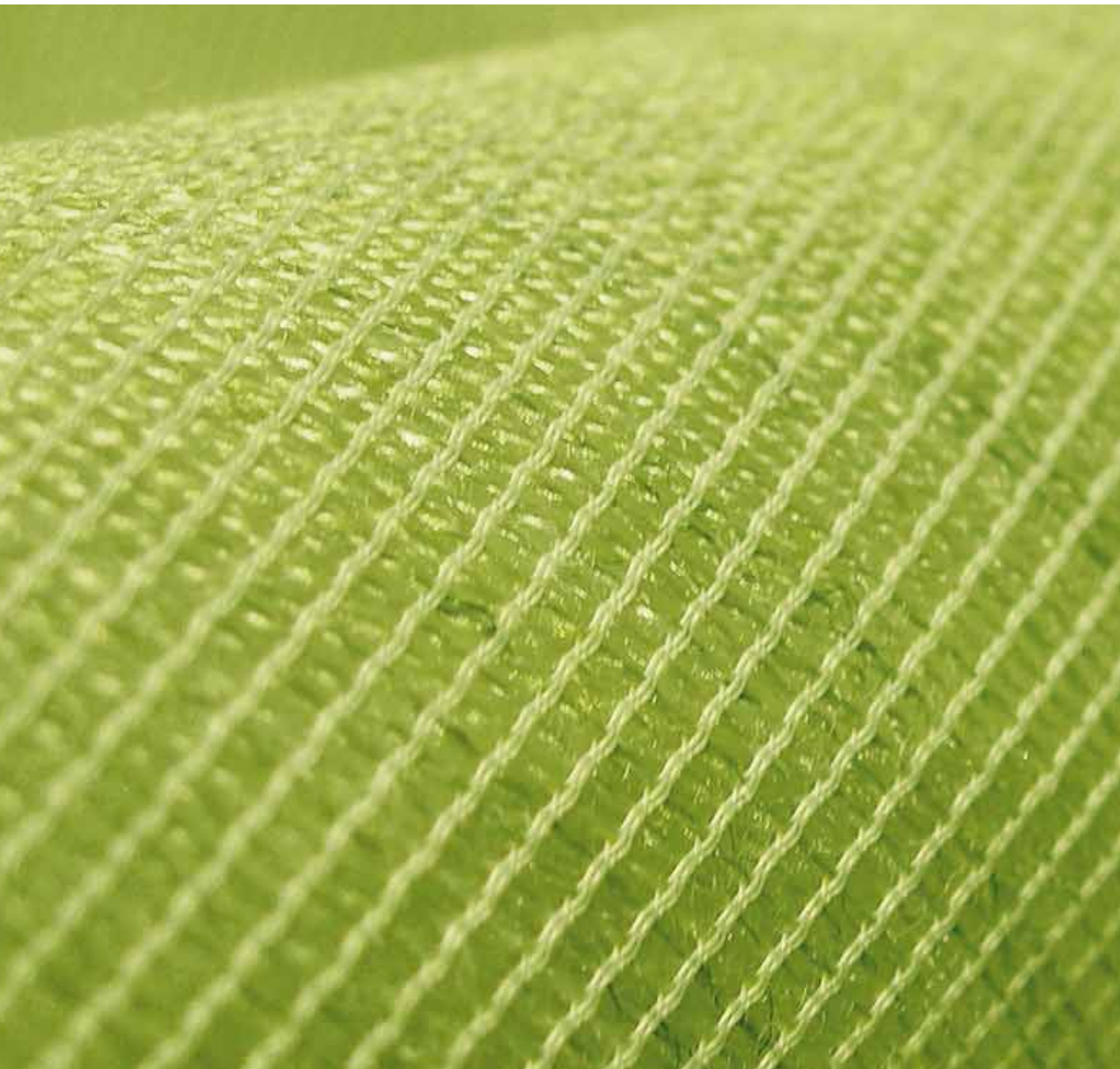
**Anke Vollenbröker**  
Head of Marketing & Business Development  
Trevira GmbH





# Trevira CS and Partners – The Book of Green Ideas

# Green Ideas



**Industry voices  
on the  
sustainability  
of textiles**



**Trevira CS –  
the eco-friendly  
material**

**The recycling  
concept**

**Fibre manu-  
facturers and  
fabric suppliers;  
portraits**

**About Trevira CS**





# An example taken from practice

Peter Joehnk & Corinna Kretschmar-Joehnk  
JOI-Design, Hamburg, an example taken from practice

JOI-Design has specialised in the design of hotels. Since hotels are meant to offer the guest a "safe home", the main criterion (for all international hotel chains and in our office) is safety, protection against fire! Nothing is worse than when people come to harm in a hotel, simply because as a planner one has inadvertently built in combustible fabrics or slippery tiles in the shower! "Look and Feel" is equally important to us as designers in selecting fabrics, and this is naturally the case, as we are after all charged with designing the hotel. Here there does not have to be any contradiction between design and safety, as many manufacturers have superb Trevira CS collections and if it is necessary at times, manufacturers are in a position to make their products flame retardant, given the large material requirements of hotels. The word "quantity" naturally implies the criterion "price" also. Whether we like it or not, this is the decisive factor our investors use to set the limits of economic sense for us.

And, of course, ecological criteria are becoming more important and in this respect natural materials are by no means always more sustainable than synthetically manufactured fibres – especially when functional properties such as permanent flame retardancy and resistance to stains also come into play. In terms of water consumption in

manufacture, contact with pesticides and transportation routes, Trevira CS comes out ahead of most natural fibres. The two Hilton Hotels in The Squire at Frankfurt Airport were completed in December 2011 and their 34,000 square metres were meant to reflect the dynamism and mobility of the structure, but at the same time offer a retreat to the traveller seeking rest, somewhere to wind down – for us as interior designers both a balancing act and an exciting challenge, which we had to keep in mind even when selecting the textile furnishing elements. In the process we were able to draw on a wide selection of high quality materials. Drapes, curtains, blackouts, a large proportion of the seat and cushion covers, furniture fabrics, along with the surface panels in the Garden Inn: we were able to select these from the Trevira CS contract collections of over 20 suppliers and they were used in the lobby, bar, restaurant, the rooms and in the conference and fitness areas. We had various criteria in making our choices, including, of course, suitability for contract usage, but also appearance, feel and, naturally, the colours and designs reflecting the total concept. Extraordinary concepts demand extraordinary materials.





# Fabrics make a place

Fabrics make a place







# Voices from the Industry

## Industry voices on the sustainability of textiles

**Sergio Costa**

President GrandesignEtico / Associazione Culturale Plana, Italy

Until recently industrial design was seen as the loftiest expression of aesthetics and functionality. Today we are witnessing a change in awareness, one in which the focus of the "project" is on the human being and adherence to rules which respect the environment. The onus is on design to be guided by this demand, starting with the quality of the working environment, the selection of materials that are not harmful to the world around, or systems for dis-

posal of waste from the production process, through to correct information for the end user. Today the ethical aspects of design are mandatory: ethics in aesthetics and functionality. "Essential" ethical parameters in the selection of materials are protection of the environment, production standards, quality of the workplace, and transparency of product description. With man-made fibres modifications make possible additional functions –

specifically for the sustainability of the product – that would scarcely be possible with conventional materials. With a permanently flame retardant polyester it is possible to manufacture fabrics of all types and for a variety of applications. The certified protection from the danger of fire spreading makes these textiles a must for the safety of all environments, which is without doubt one of the sustainability factors a product offers.



**Prof. Bettina Göttke-Krogmann**

Textile Design, Burg Giebichenstein, Kunsthochschule Halle

In interior furnishing the most important aspect of sustainability is longevity. What better way can there be to conserve resources than not to use them up in the first place? This approach is founded on designs that consist on the one hand of high quality materials, executed perfectly in technical terms, and on the other hand, on designs that can be combined easily and well with the furnishings in place. There should not be any knee-jerk reaction to hectic trends in fashion, fabrics should rather be carefully developed and designed – from the thread, to the material, through to the pattern.

The capacity to recycle stands right at the top of the list of indispensable material properties, alongside the capacity to conserve resources mentioned above. It is also important that manufacturing processes take place in closed cycles, so as to consume as little water and energy as possible. The longevity factor is very significant when one compares man-made fibres and conventional materials. Because flame retardant polyester, for instance, requires use of a single material, it is possible to operate a closed cycle that complies with the cradle-to-cradle concept.

Cotton is the most used natural fibre, however its cultivation requires vast quantities of water, placing a heavy burden on water supplies in the region. This unfortunately remains the case even when bio-cotton is produced without pesticides and chemical fertiliser. In addition, the working conditions in the cotton-producing countries are highly uncertain, as are the many further stages leading to the final product.





# Voices from the Industry

## Industry voices on the sustainability of textiles

Dr Aldo Tempesti, Director TexClubTech, Italy

Over recent decades there has been a clear rise in public awareness of the importance of environmental issues. This has also influenced the textile sector, in the form of a number of legislative changes. On the one hand these were made as a means of protecting the health of the consumer, and on the other, they have to do with production, and are intended to reduce the environmental impacts of manufacturing processes and products.

One effect of this trend is evident in the market and that is in the choice of consumers themselves as they become increasingly conscious of the need to protect the environment. The trend can have a significant economic impact on the industry itself: *environmentally friendly*, *sustainable* and *green* are terms that are actually emerging more and more frequently in product promotion.

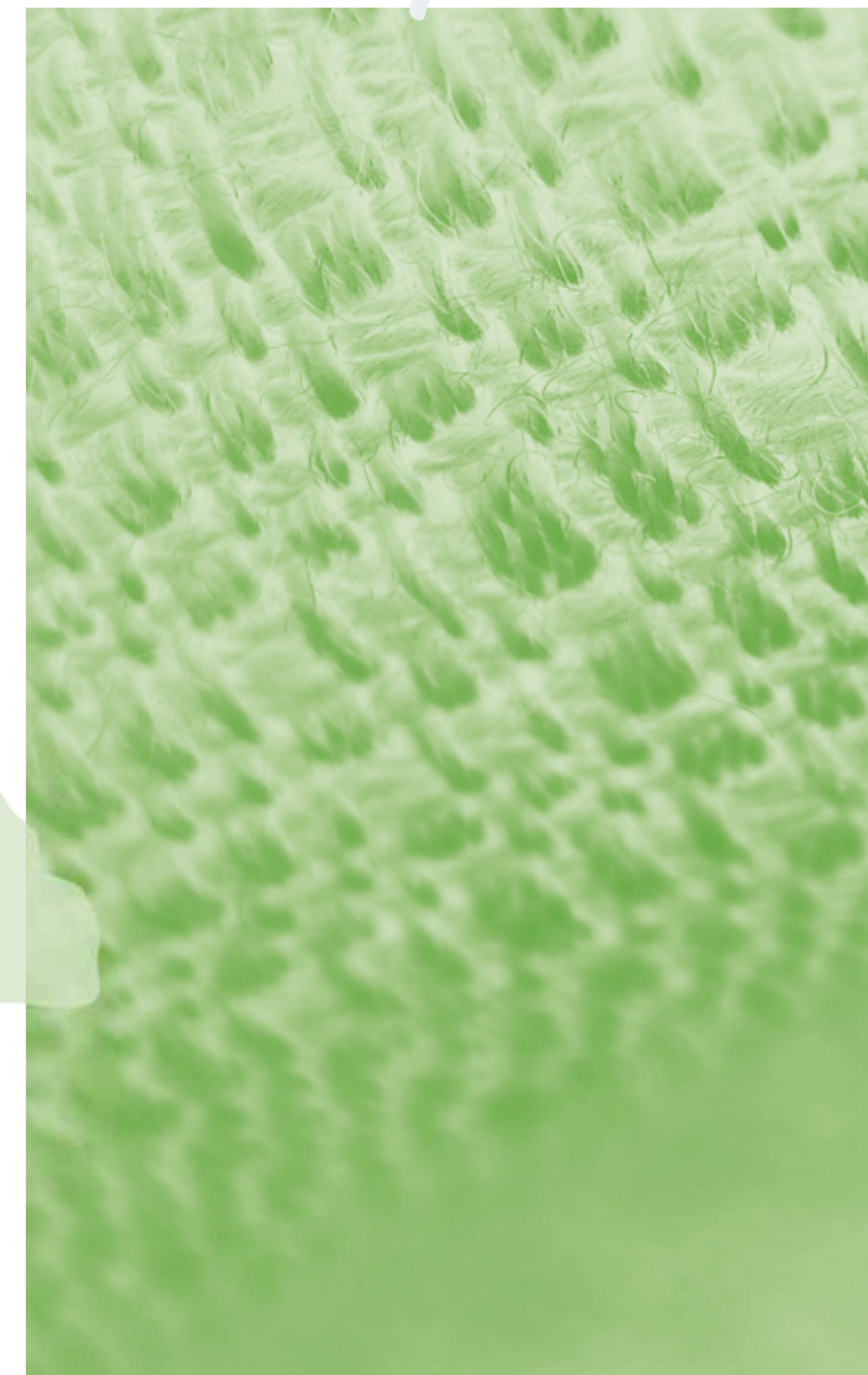
The environmental issue can also be a trump card in interior furnishings, in that there are textiles available that take account of human sensitivities and the most individual needs and that, furthermore, can furnish a response to the social problems of our time. Nowadays the home has grown to be an individual refuge, which one seeks out at the end of a long and tiring day of work. In this oasis of peace the desire

to surround oneself with safe and sustainable materials is increasingly becoming a criterion in selection.

For the end user the most significant ecological properties are those that affect health, namely the certainty that the textiles contain no substances that cause allergies and may even be carcinogenic. For many products there is also a requirement that they are free from pesticides. Impacting less on the use than on manufacture, the most important factor is the effect on the environment like the amount of energy consumed, the quantity of water required, the quality of the effluent, emissions into the atmosphere and the degree of waste in the production process. A further issue is that as far as possible there should be no release of dyes and chemicals during the use and life cycle of the product. Finally, it is very important that the possibility should be there at the end of its life to recycle the product and use it for a fresh purpose.

In this context the production of man-made fibres with regard to control of process parameters, including environmental aspects, presents significant and interesting possibilities. The capacity to develop these fibres in a manner that meets specific demands (including multifunctional properties),

means they have an advantage over traditional materials, which are often unable to supply such properties. An example of this is the development of a flame retardant polyester fibre that possesses permanent flame retardancy, in addition to the usual properties of the conventional interior furnishing article. This means they can be used in areas where special regulations relating to fire safety are in force (in the contract field, hospitals and transport): they have a permanent effect and there are no chemicals washed out.







## The environmentally friendly raw material: polyester fibres "Made in Europe"

It is no longer possible to imagine modern textiles without man-made fibres. They meet a substantial proportion of the global requirement for textiles, supplementing or replacing natural fibres that cannot provide alone either the volumes or the textile functions demanded by the market and technology. In addition, chemical fibres offer the decisive advantage that during their manufacture it is possible to adapt them to their future end use. This applies for example to flame retardant polyester fibres and yarns used to make Trevira CS textiles. They take on the added flame retardant effect at the polymer stage, rendering superfluous a later finishing process, something that is required with materials made from natural fibres. In the case of Trevira CS, the flame retardant properties are firmly anchored in the fibre raw material and are not lost as a result of external influences such as washing, ageing or abrasion.

The wide range of fibres and yarns makes possible innumerable variants in the optical and functional format of the textiles, which are now to be found in all applications in the furnishing field – from light drapes to curtain fabrics and textile wall coverings, to heavy upholstery materials and bed textiles. There are also many Trevira CS qualities in the sectors of interior solar shading and textile solutions to optimise acoustics. Applications are mainly in

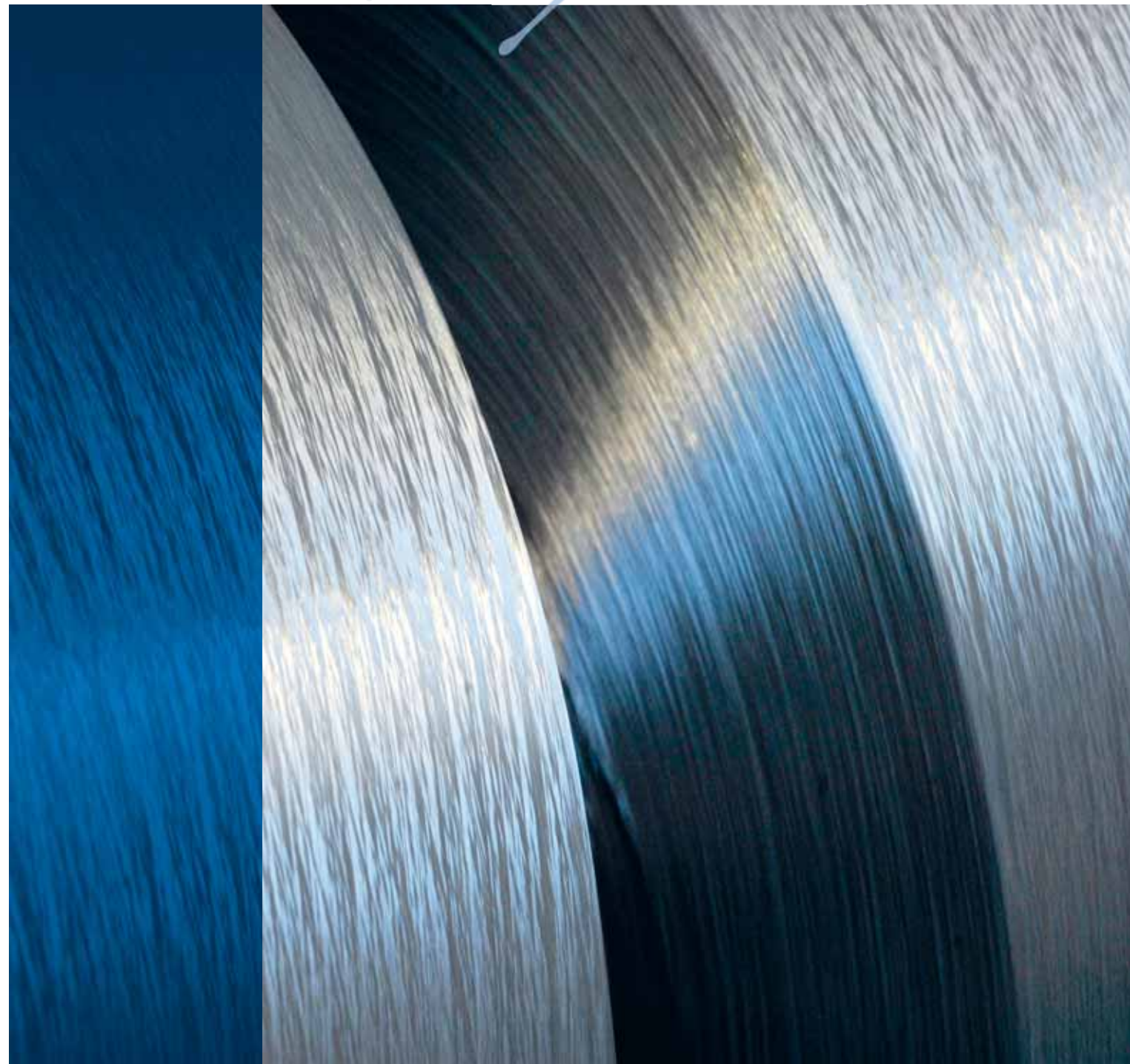
the contract market segments such as hotels, offices, public buildings, hospitals and care homes, together with cruise ships, buses, railways and aircraft. Nonetheless, fashionable Trevira CS collections are increasingly turning up in the private sector as well. The classic range of furnishing textiles does not represent the limit of possible applications any more. Recent years have witnessed a whole series of technical uses as well: hoses for air-conditioning systems, headrest covers, filter fabrics, insulation materials, elastic textiles for exhibition construction etc.

### **Polyester fibres and yarns – the Trevira ecobalance**

Customers along the textile chain, together with end users, are increasingly interested in the ecologically relevant properties of products they purchase. This also applies to textiles. It is therefore important for Trevira as a fibre manufacturer to demonstrate via the few available data on polyester how the ecobalance looks to Trevira especially since polyester is not just any polyester. There are important issues here, such as the nature of the production processes, the degree to which resources are used effectively or the avoidance of emissions, what happens with waste and the nature of energy management.

In 2011, to establish the ecological footprint of Trevira – an ecobalance to

friendly raw material



\* The appendix contains a table giving the detailed results of the study.

# An environmentally friendly raw material

ISO 14040/44 – the consultancy Systain (Hamburg) assessed all processes that form part of manufacturing Trevira polyester, from chemical precursors and raw materials to the finished article – that is, from the oil well to the Trevira loading ramp. The investigation goes far beyond the CO<sub>2</sub> balance or carbon footprint, which is often requested. This reveals the total amount of carbon dioxide emissions caused by the manufacture of products and services and provides a measurement of the impact on the climate.

The aim of the study was to define use of resources and their effects on the environment and to present a comparison with the most frequently used natural fibre (cotton). Criteria for this comparison are climate protection (CO<sub>2</sub> emissions) and consumption of resources in terms of productive land, water and energy, the ecological and human toxicity and ozone degradation, summer smog, eutrophication and acidification. Evaluations were based on one kilogram of textile fibres and/or filament yarns.

## The main results\*:

In 8 out of 11 categories Trevira polyester products come out better than cotton.

The production of 1 kg of staple fibres takes up **only 15 litres of water** during the whole supply chain, and here the lion's share goes on the production of raw materials (extracting and process-

ing oil). According to the study, the same amount of cotton fibres requires up to 7,442 litres, depending on the area of cultivation.

Trevira polyester products clearly emerge better than cotton in the categories **eutrophication (potential for over-fertilisation)**, and **ecological toxicity (pollution of water, soil and air)**.

**Land requirement:** as with other natural fibres, large productive agricultural areas are needed for cotton, while the manufacture of Trevira fibres and yarns only requires space for the extraction and processing of raw materials and for the on-site production zones.

Trevira polyester products also emerge slightly better than cotton in the factors **human toxicity** and **acidification**.

When compared, polyester and cotton emerge about the same in the categories **climate protection** and **ozone degradation**.

Trevira polyester comes out worse than cotton with **consumption of energy** and in the **depletion of abiotic resources**. Consumption of these resources arises almost completely from using oil and precursors derived from oil, which are required for the manufacture of polyester. In the case of cotton, fossil energy sources only arise in the cultivation of land and the manufacture of mineral fertiliser.

As to be expected, the **accumulated energy expenditure** for the manufacture of Trevira polyester products is higher than that of cotton. Since poly-

ester is made from petrochemical products and since the supply chain for precursors from the chemical industry and the manufacturing process are very energy intensive, this requires almost double the energy needed for cotton.

Polyester manufacturing clearly contributes more to the creation of **summer smog** than cotton, since the smog arises essentially from the combustion of fossil fuels. Nonetheless, continuous improvements in processes, together with increasing use of renewable energy sources, mean that in this area Trevira fibres and yarns are becoming more and more environmentally friendly as well.

Even those properties of polyester fibres that, in the manufacturing phase, exhibit inferior values than natural fibres take on a different perspective when one considers the stages of further processing and usage. An example of a positive effect are the easy-care properties which result in a favourable consumption of water and energy. Furthermore, it is possible at the raw material stage and during spinning to adapt polyester fibres optimally in line with their end use. They can also be spun-dyed for instance. This makes any additional treatment with chemicals or dyeing superfluous, thus lessening the impact of pollution on water, air and soil.

Fabric manufacturers have access to a large range of yarns, with which they can achieve special surfaces or effects

without additional finishings. There are for instance hybrid yarns with low melt points available that allow thermal stiffening, which is an important element of textiles for sliding panels or vertical blinds.

It is possible to finish the textile material made from these yarns rationally and in a manner that saves energy. The partial plasticization during finishing can render a coating (e. g. with acrylate) superfluous. Thus products made with these yarns constitute a single-material substitute for coated textiles, making end products in 100% polyester that can be recycled without difficulty. Last but not least, it should be noted that the Trevira CS collections available in the market today often cannot in optical terms be differentiated from those in natural fibres. Permanently flame retardant Trevira CS qualities, consisting of 100% polyester, offer a genuine alternative to natural fibre materials with a finish, such as cotton, linen, silk, wool or fibre blends. The Trevira partners in the various stages of the supply chain have all helped to create today's generation of Trevira CS textiles, whose innovative and high quality looks speak for themselves – and here the flame retardant function is contained in every single fibre.





## Post-consumer-recycling: return and recycling of Trevira CS fabrics

Recycling



A possible end use  
for recycled Trevira CS:  
Room dividers with  
sound-proofing effects.  
© Photo: Caimi

In 2013 Trevira launched a recycling concept for used Trevira CS fabrics. The end of their useful life does not mean that Trevira CS textiles end up in the rubbish dump or in the incinerator for thermal recycling. On the contrary, they are a valuable raw material and, within the framework of a return and recycling concept, they can proceed on to appropriate new uses.

Since the textiles are manufactured from 100% Trevira CS, the recycled textiles are made from a single raw material, which is a favourable precondition for recycling. Possible end uses are, for instance, materials for insulation or soundproofing – which could include applications in acoustic panels for public buildings.

The concept foresees that at the end Trevira will take back fabrics consisting of 100% flame retardant Trevira fibre and filament yarns when their useful life is over. The fabrics need to be clean, dry and free of contaminations and coatings. They must also have passed the Trevira CS trademark test, as the identification of the fabrics and the permission to participate in the recycling scheme is handled via the trademark approval number registered at Trevira.

All players in the textile chain, from the yarn producer to the end user, will be informed that used Trevira CS textiles will be taken back by Trevira. For example, when refurbishing a hotel, the hotel owner/manager or the contracting CEO involved can send the old Trevira CS fabrics back to Trevira. These fabrics are put on stock and, when the required quantities have been collected, proceed on to mechanical processing and recycling. To ensure sustainability in implementing the recycling process, Trevira will take into account the location of the end consumer. Fabrics sent in by companies in the European area are collected in the Trevira production plant in Bobingen (southern Germany), for onward transmission to recycling, while sensible local arrangements will be made for textiles outside Europe.

Detailed information  
on the Trevira recycling  
system can be found on  
[www.treviracs.com](http://www.treviracs.com)  
or please contact us:  
[treviracs.info@trevira.com](mailto:treviracs.info@trevira.com)





Klaus Holz,  
CEO Trevira GmbH

## The fibre manufacturer introduces itself: Trevira GmbH

With our origins in the initial period of polyester fibre manufacture, we can look back over long experience. Trevira began its history in 1956 in the fibre division of the former Hoechst Corporation, when it launched the polyester fibres and filament yarns on the market under the brand name Trevira. We have since then acquired the expertise that has made us one of the leading manufacturers of polyester specialties in Europe.

1980 is the year our premium product Trevira CS appears on the market, developing over time to become one of the most successful brands in the furnishing sector and heralding a new era in contract textiles. Two years later the new fibre gains the Innovation Prize of German Industry. Today the flame retardant fibres and yarns make up about 20% of our turnover.

Sustainable economic activity and a commitment to protect the environment have long been firm elements of our company policy and for years now we have worked steadily above and beyond legal requirements to conserve resources by using them more efficiently. Following the successful certification of our energy management system, we have set ourselves the ambitious goal of cutting the specific energy input by a further 10% based on the 2012 figure, and to

achieve this by 2020. We also support the extension of renewable energies, in that we are making available the roof areas of the production sites at Bobingen and Guben to operators of photovoltaic systems.

Since the middle of 2010 we have been employing renewable raw materials in our fibre production, i.e. PLA biopolymers and are also working on a concept for recycling Trevira products. A system involving returns and recycling of Trevira CS textiles started in 2013.

Our well-trained workforce is the basis of our success and they embody the skills and quality we offer our customers. To our customers we are a reliable partner in our joint search for customised solutions to the demands arising from the need for new products and end uses. Continuity and reliability form the basis of both our internal and external relations. We see ourselves not only as a manufacturer of fibres and yarns, but also as a service provider to our customers and partners along the textile line. In this we want to support them to gain success – which we recognise as the key to our own success.



### Trevira GmbH

Bobingen / Germany

Founded 1956, re-established 2010

Employees: 1,140

Turnover 2012: 232 million €

Certified to ISO 9001, ISO 14001 and ISO 50001

Trevira products are Oeko-Tex Standard 100 certified

[www.trevira.com](http://www.trevira.com)



***“The future is when each of us recognises his/her own responsibility and acts accordingly.”***

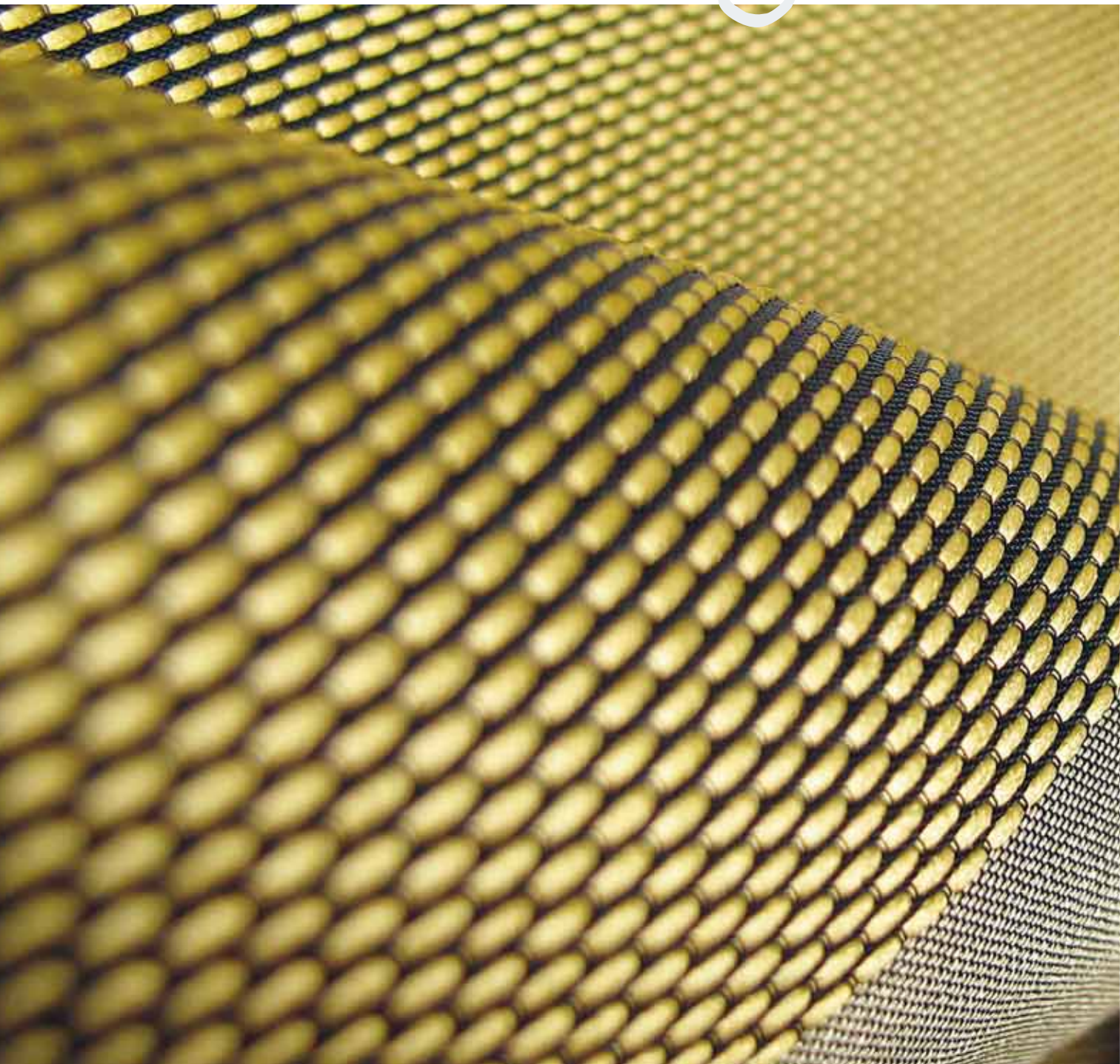
CEO Klaus Holz



# Introducing the

Introducing the Trevira CS Club Members

# Trevira Partners



**Création Baumann**

**drapilux**

**Gerriets**

**JAB**



**Kobefab**

**Lelièvre**

**Panaz**

**Rubelli**



**Saum & Viebahn**

**SoFarSoNear**

**Sonnhaus**

**Tapicerías Gancedo**







Philippe Baumann  
CEO Création  
Baumann AG

# Création Baumann

It depends on output, and not on input. The output of our family business consists of high-value and innovative textile solutions we have been offering our satisfied clients for over 125 years. Today we are represented in 40 countries, we have 9 subsidiaries and showrooms in the most important metropolises in the world, such as New York, Paris, Tokyo or London. Our range covers in excess of 6,000 articles – from a vast variety of curtains, to roller blinds, panels and vertical blinds, upholstery fabrics and adhesive textiles.

With its countless colours, patterns and materials, the product range for both the contract and residential sectors offers a huge variety of possible combinations. For contract use there is a comprehensive collection of innovative, functional textiles available. These include blackout fabrics, anti-glare and privacy screen materials, flame retardant fabrics, textiles tested for harmful substances, and textiles with acoustic properties.

From design development, through production of fabric, to sale of product, everything is in our own hands. This is the key to our success. Since we do everything ourselves, we are able to call on a wealth of valuable know-how built up in the company over four generations, expertise that gives us the skills to develop new product. We continually invest in innovative production processes and machinery and intro-

duce these alongside the traditional technologies to create unconventional textiles, such as digital print for individual design ideas or laser techniques. Before a product comes on the market, however, it has to undergo a complex test procedure in our in-house test laboratory or in specialised laboratories. We use the finest materials and in selecting and procuring them we take account of ecological criteria. As a manufacturing enterprise we attach importance to sustainable development, which gives equal consideration to ecological, social and economic aspects. Thus we are always improving the energy efficiency of our offices and factory buildings, we clean up emissions and use a coolant reclamation plant. We offer our highly motivated employees social benefits such as in-house pension funds and a company social counselling service. They make a positive contribution with their ideas and suggestions for improvement via our "digital post-box" and participate in our success. We support our locality with financial aid to clubs and also sponsor cultural institutions, in particular the Kunsthau Langenthal.



## Création Baumann AG

Langenthal / Switzerland

Founded: 1886

Employees: 240 (incl. sales offices)

Turnover 2012: 50 million CHF

Awards: GOTS for specific products, Certificate "CO<sub>2</sub> and kwh reduced" of Energieagentur der Wirtschaft, ISO 9001, 14001, Oeko-Tex Standard 100

[www.creationbaumann.com](http://www.creationbaumann.com)



**"The future is when we are sensitive to changes in our environment and when we as an organisation adapt to these and renew ourselves in so doing".**

CEO Philippe Baumann







Dan Schmitz  
CEO drapilux,  
Schmitz-Werke  
GmbH + Co. KG

# drapilux Schmitz-Werke



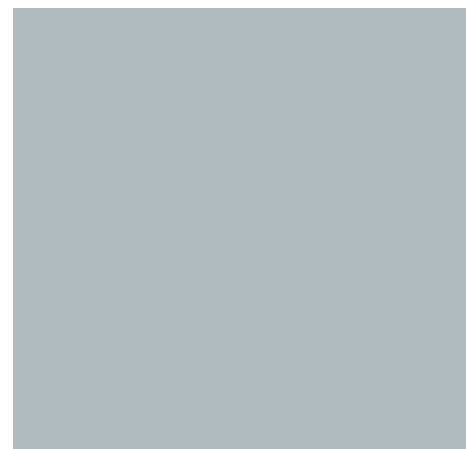
More safety, more cultured living, a better quality of life – this is what we offer our customers. Our furnishing textiles combine stylish decoration with intelligent functionality and provide fresh impulses. On developing a permanently flame retardant generation of materials, we established in 1980 the basis for contract fabrics that are of a high standard both in aesthetic terms and safety. We are constantly moving forward with innovative products that supply new materials for perfect acoustics, textiles with guaranteed fresh air or antimicrobial curtains and drapes.

At the top of our list of priorities we place excellent quality of product, reliability of service and a constant eye on progress and innovation. We look for leading performers when selecting suppliers. The quality of our products rests on choice yarns, high-value fabrics and intelligent functions. Our stringent quality controls deliver added safety. It is extremely important to us that we act in a way that is compatible with the environment, so in our manufacturing processes we are mindful of ecological criteria. We place great stress on conserving the environment with our sustainable products and recyclable packaging. We are certified to ISO 50001 and we save energy, e. g. we have installed a heat recovery unit

on the stenter frame in the finishing unit. We also operate a buildings management system called "FAMOS", where particular attention is paid to energy consumption and environmental issues. We do not use raw materials that are ecologically questionable.

We firmly believe that contented employees constitute one of the most significant preconditions for high standards of quality. For this reason we place great value on working together in a way that focuses on the client, involving all employees closely. This is because we think further development is only possible with the creative ideas and suggestions of each individual. Such ideas come about in our ongoing process of improvement, but they also emerge from a system that enables employees to submit suggestions for improvement, for which they are rewarded. The social benefits enjoyed by our employees include a health programme and there is also a project in which the possibilities of childcare provided by the employer are being assessed.

Also of importance to us is interaction with the external world that is socially responsible. We support organisations such as the DKMS and sponsor a variety of social institutions with annual Christmas raffles and we participate in the "Social Day" in Emsdetten.



## drapilux, Schmitz-Werke GmbH + Co. KG

Emsdetten / Germany

Founded 1921

Employees: 750 (not including subsidiaries)

Turnover 2012: 101.6 million €

Certifications/awards:

ISO 9001, 14001 und 50001. Oeko-Tex Standard 100, Recycling-Certificate Iserlohn, Top 100 employers (Handelsblatt), Red Dot Design Award (2001, 2006, 2009, 2012), Industry Forum Design Hannover 1997, 2001, 2013, German Design Award 2014, Innovation prize Messe Frankfurt 2003, et alia

[www.schmitz-werke.com](http://www.schmitz-werke.com)



***"The future is a commitment – our company motto reflects this: 'Committed to the future – always'. We see this applying to all manner of areas, from managing and developing our employees, to protecting the environment and quality assurance, to innovation and perfect products."***

CEO Dan Schmitz





Hannes Gerriets  
CEO Gerriets GmbH

# Gerriets GmbH

Since its establishment as a textile wholesaler in 1946, our family-operated company has become a well established specialist for theatre equipment. "We are Gerriets – The Drama Experience" – with this slogan we announce to the world that we are ready and able to satisfy even the most complicated customer wish. This presumes a powerful team and clear procedures and so our internal motto is that we are a client-oriented company, one that is founded on employees who are committed and enterprise-minded. It is our aim to supply products of the highest quality, while taking into account means of production that are sensitive to the environment.

Our products are textiles, projection screens and track systems for opera houses, theatres, cinemas, places of assembly and public buildings, trade fair stands and industry. We supervise projects throughout the whole world and in 2012 sold a total of 1,315 tons of stage equipment. Our clients are able to select from almost 800 different patterns for their textile needs, from light net to heavy stage velvet. The environment is important to us and resources are costly. We consolidate regular deliveries to single consignments and they are brought to the client by partners who are environmentally certified. To keep routes as short as possible,

we operate globally via numerous overseas centres.

With us design and construction are energy efficient and we switch off the lights and machinery outside working hours, thus economising on heating and electricity. We use eco-friendly wood pellets to heat our buildings. In 2007 our French subsidiary launched an action plan to minimise pollution of the environment. In conjunction with our partners this enabled us to gain the "ECO<sup>2</sup>" certificate in France. Furthermore, we send our mail in France via the so-called "lettre verte", which reduces the CO<sub>2</sub> emissions in standard mail. Most waste products are recycled via our logistics partners.

Our immediate environment is important to us as well. We support a variety of organisations by donations of products or cash and participate in sporting events.

And we use the ideas of our employees, whose suggestions for improving our products and processes constantly help us to become better. An example of this was the idea to extend the range of colours by adding a white Trevira CS velvet.



▲ The Queen's Room on the luxury cruise ship Queen Mary 2

Samara Opera & Ballet Theatre ▼

## Gerriets GmbH

Founded 1946

Employees: 167

Turnover 2012: 28 million €

Awards include:

ECO<sup>2</sup> Certificate,  
FOCUS Safety Silver 2007,  
International Design Prize Baden-Württemberg 2007,  
PLASA Award for Innovation 2011,  
ABTT Product of the Year 2013

[www.gerriets.com](http://www.gerriets.com)

▼ Teatro Real, Madrid



**"The future is continuity. We tackle any challenge in the theatre."**

CEO Hannes Gerriets





Ralph Anstoetz  
CEO JAB Josef  
Anstoetz KG

# JAB Josef Anstoetz

The whole world of fabrics for the home in one family enterprise: our extensive product range for interior textile furnishings is the most comprehensive in the business offered to users. Along with drapes, carpets, decorative and upholstery fabrics, our group of companies also supplies interior solar shading, wallpapers, furniture fabrics, lamps and tables. The Bielefelder Werkstätten and JAB ANSTOETZ Carpets are also part of the group, alongside the fabric manufacturers.

Founded 67 years ago in Bielefeld, we are represented in over 80 countries today. Openness both inwards and outwards forms the basis of our company philosophy, as we firmly believe that only synergies of working together can turn visions into reality. The trust we have established with business partners throughout the world makes us certain that our way is the right one. Our employees live up to this philosophy with their daily activity, ensuring that there is always much happening in the future and that we are achieving. Teamwork and social facilities such as a day nursery, a company sports association and health programmes, underpin the internal community of the firm. We also accept social responsibilities outside the company: with the Matthias-Anstoetz Foundation we support facilities for blind children and

those in need, including in India and Brazil.

We are involved in the environmental management project "Bielefeld Eco Profit Company", which annually awards companies for sparing use of resources and conservation of the environment. We have made considerable savings in energy costs by improving our buildings, modernising the energy infrastructure, constructing a heat and power unit and a photovoltaic system, thus helping to extend renewable energies.

The JAB ANSTOETZ Headquarters in Bielefeld received the award as an ECO profit company in 2003, followed by the Bielefelder Werkstätten in 2013. The Bielefelder project is in our view a good example of togetherness and sustainability in practice.

## JAB Josef Anstoetz KG

Bielefeld / Germany

Founded 1946

1,300 employees worldwide

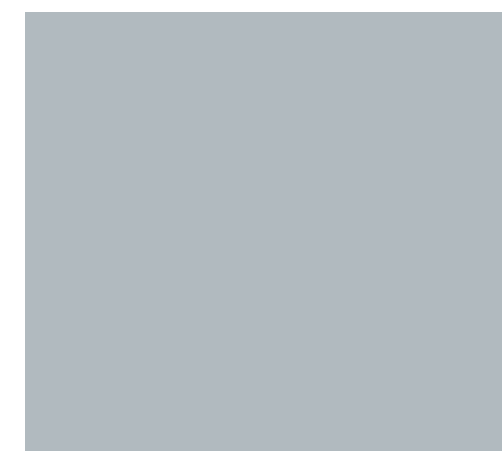
Certifications:

Oeko-Tex Standard 100,  
Bielefeld ECO Profit Company

[www.jab.de](http://www.jab.de)

***"The future is to develop successful strategies and ideas for the company and to have the courage to set to and implement these."***

CEO Ralph Anstoetz







Cees Vissers  
CEO Kobefab  
International BV

# Kobe Interior Design

Our ambition is to surprise, inspire and innovate the world of interiors. Since 1976 Kobe has marketed soft furnishing fabrics and wall coverings for the private and contract interior sectors, thanks to over 120 highly committed employees who provide services of the highest standard. We are driven by a creative passion for interior design, combined with a strong focus on the development of innovative quality fabrics. Our products and services suit the requirements in all sectors, from the retail and contract markets through to the end consumer. Our competence lies in developing long-term mutual efficiency and profitability. We have a solid European base with offices in the Netherlands, Belgium, Germany, France, Turkey and the UK, and you find our customers in 50 countries worldwide.

At Kobe we place a high priority on the sustainable value of our products. Our timeless designs and colours in high durable quality enjoy a long life. We offer materials with ecological advantages, such as Oeko-Tex certified Trevira CS textiles with their inherent safety, design and easy-care functions, or our low-emission, eco-friendly Koroseal wall coverings, which help to gain points for the LEED® certification of a building.

We strive towards efficient use of resources, which has led us to create

waste recycling programmes, reduce the use of plastic and adhesive tapes by 70% and reuse pallets and packing materials. Our fully automated warehouse runs smoothly and reliably without artificial lighting. Delivery pick-up and drop-off is conducted simultaneously and with ultimate logistical efficiency by our partners, thus avoiding extra trips. To save heating and energy, our buildings are optimally insulated and allow a maximum use of daylight. Our commitment to sound environmental practices applies also to the choice of equally dedicated partners. Our policy in purchasing raw materials and services includes a strict requirement that all our suppliers observe environmental principles in production, dyeing and finishing.

We encourage our employees to help increase the efficiency of all processes. We collect their suggestions in an "Idea Box" and implement them when practicable. Regular social events, health care schemes, tailor-made training programmes and other social benefits are firm elements of our team activities. We encourage the employees to use the bicycle rather than the car for transportation.

Our sponsorship activities include the "Heart for Gambia" Foundation, as well as training projects for young interior designers and upholsterers in different countries.



**Kobefab International BV**  
Valkenswaard / The Netherlands  
Founded in 1976  
120 employees  
Capacity: 4.5 million metres  
Certified to DIN EN ISO 9001,  
Oeko-Tex Standard100  
[www.kobe.eu](http://www.kobe.eu)



*"The future is partly preordained, but also largely influenced by ourselves. People who understand and accept given facts, while focusing their energy on shaping the areas that we are able to influence, will play a significant role in defining a better future for all aspects of our society, organisations and for ourselves."*

CEO Cees Vissers





Patrick Lelièvre  
CEO Lelièvre SAS

# Lelièvre SAS

In 2014 we shall look back on an entire century of successful family business and textile competence. We are a family company, with a real 'pater familias' philosophy and a high respect for each employee and his/her family. Over time we have become a major player and reference in the world of high end furnishing fabrics. Our strengths lie in our ability to create and design for our clients the fabrics that meet their requirements. To deliver the quality they can expect from us, we give our maximum commitment and expertise when we design the visual aspect, the feel and the colour tones of our materials. Our furnishing fabrics and accessories, which also include an "Eco" collection, find their way into hotels, restaurants and private homes worldwide. The classical and the modern are both important to us. The environments created with our fabrics reflect both the traditional and the most contemporary atmospheres. Innovation is a driving force of our development and new elements such as the launch of our *Sonia Rykiel Maison* and *Jean Paul Gaultier* collections open the gates to the fashion world.

Combining the different silk weaving techniques, our factories use both traditional hand looms and computer-controlled mechanical looms, enabling us to create contemporary designs on demand as well as replicating designs

from third-party documents or from our own vast collection of historical archives. The 6,000 items in our product list offer professional interior designers and architects a vast array of quality fabrics suitable for all types of interiors, both in the residential and contract markets. They include velvets and sheers in a variety of compositions, designs and textures, among them silks with historical designs or a contemporary inspiration, and a complete range of flame retardant Trevira CS contract fabrics.

We carefully select the materials and suppliers. And we also take the ideas of our employees seriously – a committee reviews all suggestions collected from the workforce on a monthly basis. We help with sports fees to encourage them in their health programmes. Our cultural activities include partnerships with museums such as the Musée Jacquemart-André and the Centre Georges Pompidou in Paris. We donate accessories to social foundations for auctions or fabrics for schools and institutions like *Ecole Boule* or *Les Arts décoratifs*.



## Lelièvre SAS

Paris / France

Founded in 1914

150 employees

Turnover 2012: 25 million €

[www.lelievre.eu](http://www.lelievre.eu)

**"The future is the consequence of the present: let us choose our actions today carefully!"**

CEO Patrick Lelièvre





Anthony Attard  
CEO Panaz Ltd.

# Panaz Ltd.

For more than 25 years we have focused on design excellence, impeccable quality and differentiation through technical innovation. The result is a range of beautiful, exclusive and durable flame retardant furnishing fabrics. In cooperation with internationally acclaimed interior designers, our hospitality fabrics grace some of the most iconic interiors around the world, be they guest rooms in hotels or aboard ships, in lobbies, theatres, casinos or restaurants. Our healthcare division specialises in intelligent textiles to promote a sense of well being in healthcare environments, and our corporate division offers stylish, durable and comfortable fabrics for workspace seating – playing their part in promoting the corporate brand.

Over 10,000 stock items are available overnight from our computerised warehouse, with our highly trained staff guiding customers to the product that suits their particular requirements. Advanced materials ensure the best standards of flame retardancy and durability and result in fabrics that look good for longer with even the most extreme usage.

From the very beginning, we have been committed to sustainable manufacturing and consideration of the environment. This forms a fundamental part of our business strategy and our practical supporting measures include our employees as well as our suppliers.

Panaz printed fabrics are produced using sublimatic printing techniques which involve no chemical processes, water or effluents. No solvents are used during the process and any possible contaminants (like waste oil during routine maintenance) are collected. All packaging materials used in our manufacturing processes are obtained from using pulp from sustainable forests. To achieve internationally required FR properties, no chemical treatments are required. Our collections have always been based on the use of inherent FR yarns and collections using Trevira CS also qualify for Oeko-Tex certification. We monitor and track the adherence to REACH within all areas of our Supply Chain.

A survey recently conducted by Carbon Trust identified seven projects targeting a reduction in energy use and therefore CO<sub>2</sub> emissions of 15%. In conjunction with the Carbon Trust, we are actively exploring more ways to reduce our environmental impact and implement a sustainability programme that will lead us into the next generation of safe sustainable policies.

## Panaz Ltd.

Burnley, Lancashire / UK  
Founded in 1986, 80 employees  
Turnover 2012: 18 Mio. €  
Certified to / Awards:  
ISO 9001, BIBAs (Be Inspired Business Awards) in two categories: Exporter of the Year and Medium Business of the Year (2013); International Achievement Award at the Red Rose Awards (2013), Queens Award for Innovation, Queens Award for Export.  
[www.panaz.co.uk](http://www.panaz.co.uk)



***“Future is innovation in product development and processes, responding successfully to the conditions of a changing environment.”***

CEO Anthony Attard





Nicolò Favaretto  
Rubelli  
CEO Rubelli S.p.A.

# Rubelli S.p.A.

Committed to both tradition and innovation, our mission is to be a leader in creating and supplying furnishing textiles, wall coverings and accessories of high quality and design. With our dedicated and experienced employees, we aim to bring beauty and comfort to spaces all over the world. Our range of textile products includes 900 fabrics in 6,700 colours.

Most of our fabrics are made in the province of Como at our mill in Cucciago, the former nineteenth-century Zanchi mill. Here fabrics for the Rubelli and Armani/Casa collections, as well as for major projects such as the La Scala opera house and the La Fenice theatre, are created. State-of-the-art jacquard looms weave materials for all types of furnishing in natural and synthetic fibres, including Trevira CS textiles for the contract sector.

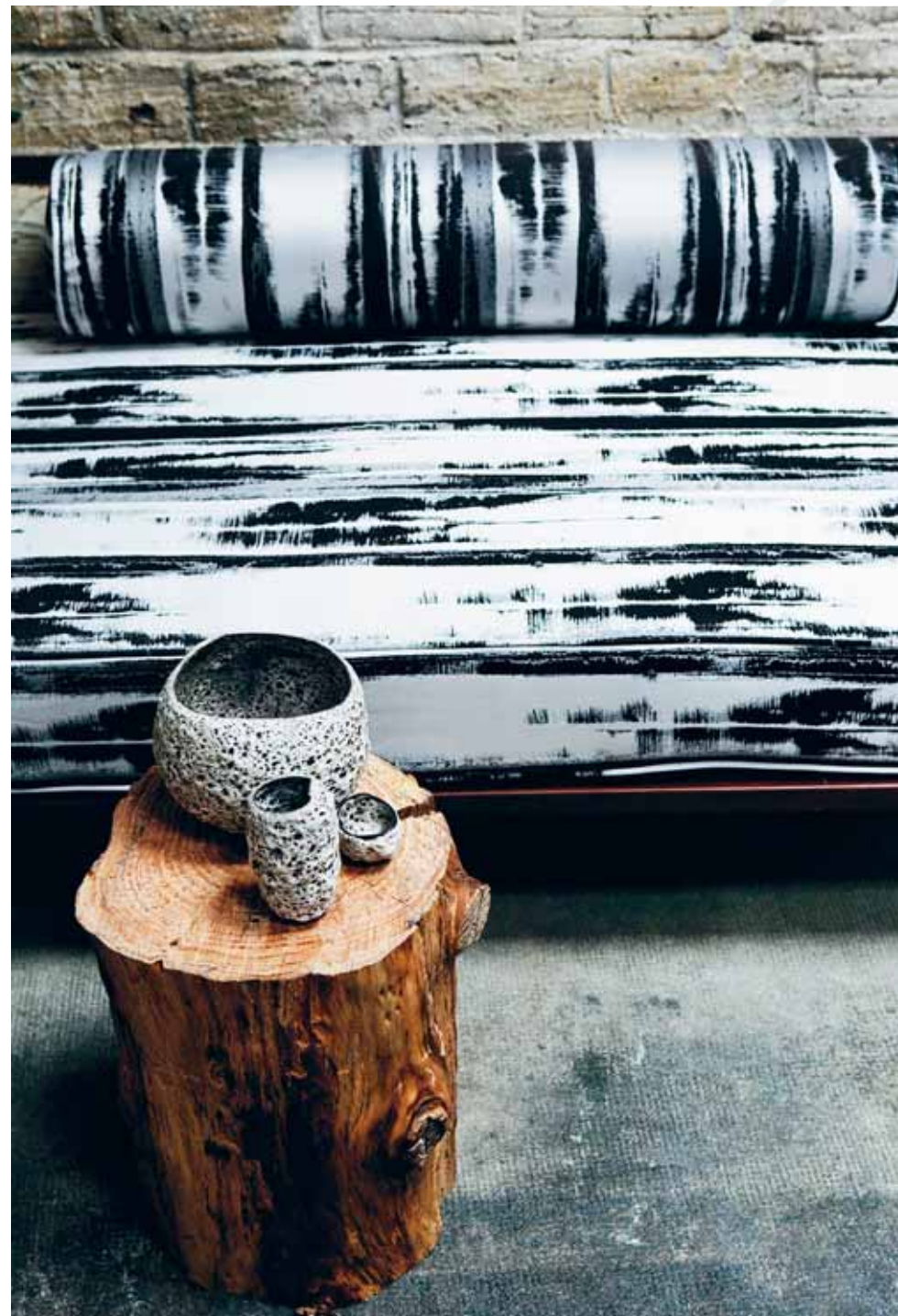
With the acquisition of the Donghia brand, we have extended our business beyond fabrics to include unique furniture, accessories and lighting, manufactured with carefully selected materials, and assembled and finished by hand. The lighting products are exclusively made in Murano, according to ancient techniques developed over past centuries for this famous glassware.

We observe environmental standards in our production. We operate systems

to reduce the acoustic pollution in our mill and all our buildings are well insulated against heat and cold. We require the REACH certificate from our suppliers, to ensure that there are no toxic substances in our fabrics.

Our collaboration in cultural projects includes, for example, the Peggy Guggenheim Museum in New York, the Bolshoi Theatre in Moscow and the Biennale Internazionale dell'Arte di Venezia. We support young designers and UNICEF. In 2010 we donated over 600 metres of Rubelli fabrics for the Turin Cathedral.

Our historical archive, housed in the famous Renaissance palazzo Corner Spinelli in Venice, is a collection of over 6,000 textile documents from the end of the fifteenth century to the first half of the twentieth century. The fabrics in the Rubelli archive represent a unique source of creative ideas, offering designers an excellent starting point for the creation of exclusive fabrics made to specific customer requirements. As a "textile memory" of our know-how, they contribute to the reconstruction of ancient textiles that formed part of historical buildings all over the world.



## Rubelli S.p.A.

Venice / Italy

Founded in 1889

161 employees (in Italy)

Turnover 2012: 32.6 million €

Capacity: 670,000 running metres

[www.rubelli.com](http://www.rubelli.com)

**"The future is  
creating something  
beautiful."**

CEO Nicolò Favaretto Rubelli





Susanne Schicker-Westhoff  
CEO and shareholder Saum und Viebahn

# Saum und Viebahn

As a medium-sized company with more than a century of experience, we see our success not only in the quality of our products, but also in long-standing cooperation with our workforce, suppliers and customers. According to a survey by BTH magazine in 2013, we came top in important categories such as reliability and speed in delivery, quality of service, sales promotion and prospects for the future.

High-value upholstery fabrics, drapes and decorative fabrics are our specialty, along with the made-to-order manufacture and supply of interior solar shading (pleated blinds, roman blinds, panel track and vertical blinds). In upholstery fabrics we are also partners for powerful brands such as Charmelle. In 2012 we sold over 193,000 running metres of textiles for interior furnishings. In addition to Germany, we are active in our further core markets Europe, Russia and the Near East.

The products in our contract fabric segment blend function with aesthetics and can be combined in a wide range of colours and facets. From country-house style to puristic city chic they will respond to any design wishes made. We can also realise the client's own developments and special colours, and here we offer total solutions, where all components in the textile elements are perfectly harmonised.

The use of sustainable materials is important to us. In hospitality and catering, in fitting out the office or the ship, we are not solely concerned with attractive textile designs, the longevity of the textiles is also a significant factor in sustainability. A further ecological plus of the permanently flame retardant materials in our collections is their easy care property and their robustness.

Sustainability and social responsibility are firm elements of our business. Thus in selecting suppliers we ensure that they meet our criteria in ecological terms, and with deliveries we minimise the impact on the environment by consolidating these in transit. We participate in a variety of social projects and support clubs in the locality. We have established a fund to support employees in emergencies and our company football team is a significant contribution to the feeling of togetherness.

Our junior staff means most to us: Trainees make up 10% of our workforce and we have twice won the Kulmbacher Prize for extraordinary competence in training, an achievement we are proud of.



## Saum und Viebahn GmbH & Co. KG

Kulmbach / Germany

Founded 1901

Employees: 172

Turnover 2012: 32 million €

Awards:

Kulmbacher Prize for Competence in Training 2007 and 2011

[www.saum-und-viebahn.de](http://www.saum-und-viebahn.de)

***"The future is to concentrate on one's strengths, to accept responsibility and to be socially-minded in one's actions."***

CEO and shareholder  
Susanne Schicker-Westhoff





# SoFarSoNear

To combine design with sustainable practices, and to inject luxurious Italian style into traditional handcrafted products – this was our objective when we started our business. Based in Milan and in London, we are a privately run supplier of high-end fabrics and carpets, with a focus on sustainable materials and fair trade.

Our textiles, wallpapers and carpets for residential and hospitality interiors are not only distributed in Europe, but also in China, the USA and Russia. This is the basis for our further expansion. In 2006 we established a business unit called 100% Human Design. This promotes textiles from fair trade organisations in Thailand and Nepal. As the focus was on the right design and materials, it took us three years to find skilled artisans who would use traditional, natural practices to create our designs. We wanted to work with artisans who are consistently good and who use materials that are sustainably made. Our suppliers for these collections are all members of the International Fair Trade Association (IFAT), with safe and healthy workplaces. The materials in this collection include hand-made Thai silk, Nepalese cashmere and felts, abaca hand-woven in the Philippines, natural hand-knotted carpets and shaggy rugs, made without chemicals and dried in sunlight.

While the concept of a “green” product is becoming more and more interesting to consumers, we believe the essential selling point is still the stylish design of an article, and in developing innovative products we are not afraid to push design boundaries. And while we use natural and authentic production methods, we try to give each piece a modern twist. This also includes the use of modern materials like Trevira CS, especially for contract textiles.

In addition to our catalogue, we offer customers (particularly architects, fashion ateliers and interior designers) the opportunity to develop tailor-made designs for their projects. We can create anything: Whenever a customer likes a material, but would like it in a specific colour or design, we are happy to make that.

Luxury and innovation do not exclude social conscience – on the contrary, in the long run materials embracing both aspects will not remain niche products, but will meet a growing general consumer trend.



## SoFarSoNear s.n.c.

Milan / Italy  
Founded in 2004

## SoFarSoNear UK Ltd.

London / United Kingdom  
Founded in 2011

Certificates & awards:  
Oeko-Tex Standard 100 certificate for products, Best Eco Product by BY ELLE Decoration 2009, Winner Carpet Design Awards 2013

[www.sofarsonear.com](http://www.sofarsonear.com)



**“The future is uncertain, but we are constantly trying to draw a path that gives us the illusion of certainty.”**

CEOs Francesca Gasparotti  
& Luca Giulio Ferreccio





# Sonnhaus GmbH

With our products we combine high quality living accessories with individual lifestyle. We develop our range with an eye on international trends, but always with the regional requirements of customers in mind. Our customers are specialist dealers and craftsmen with high demands with regard to the quality of advice and manufacture. This we guarantee with attractive, expressive collections, numerous modern sales aids and competent training. Personal contact is an important element in our customer relations. We operate a fine-meshed service network that ensures individual treatment of customers, supported by sophisticated logistics.

In product development we work together with leading international manufacturers. Here too quality stands as a vital criterion – both in the selection of materials and in their manufacture. Our product range covers all components for the floor, wall, window and ceiling, along with accessories. We offer complete solutions and command extensive storage capacity, enabling us to assist customers access a complex procurement market.

Sustainability in economic activity we see as totally natural, applying both in choosing service providers and suppliers and also to managing resources. In our deliveries long distance routes are

covered, on principle, environmentally friendly by rail cargo, while energy saving measures are a firm element in daily operations.

We aim to achieve a high level of identification of our workforce with Sonnhaus and involve them in the development of the company. They excel with their skills, their orientation towards customers and their readiness to learn. With us "Get better" is not only something written on paper: within the framework of a solidly implemented procedure every company unit works continuously to improve processes and operations. Health programmes in the lunch break can help our people to keep fit, while a fully equipped canteen promotes a feeling of togetherness in the company.

We record donations and support of local institutions in exercising our responsibilities to the outside world.



CEO Sonnhaus GmbH  
**Mag. Alfred Klambauer**

CEO shareholder  
Sonnhaus GmbH  
**Mag. Gerhard Fessl**

CEO Sonnhaus Germany GmbH  
**Reinhold Hampf**

*"The future is  
to so shape  
the present  
that the future  
can become  
reality."*

## Sonnhaus Ges.m.b.H.

Austria / Wels  
Germany / Straubing  
Founded 1931 (Austria)  
2002 (Germany)

Employees: 150

Certificates / Awards: Oeko-Tex  
Standard 100, Wels Traditional  
Company (Austrian Federal  
Economic Chamber)

[www.sonnhaus.eu](http://www.sonnhaus.eu)







José Gancedo  
CEO Tapicerías  
Gancedo SL

# Tapicerías Gancedo

Tapicerías Gancedo was founded by José and Bernardo Gancedo in Barcelona in 1945 with the opening of the first shop. After the successful start, our company expanded in the second generation under the management of Pepe Gancedo, who made Gancedo the most innovative textile business in Spain. We started extensive collaboration with the most prominent Spanish artists at that time, and with our advanced design concepts we were able to offer the most avant-garde and sophisticated textile collections. Today, after more than 65 years experience and dedication to creating state-of-the-art fabrics, the third generation of our family-owned business continues the tradition of textile decoration in a broad range of domestic and international projects. We aim to set the trends, seeking the balance between different decorative elements. We offer the best solution for the renovation and decoration of interiors, with a universe of modern designs, full of life and inspiration.

Our professional team of committed designers, carpet and wallpaper fitters, with their experience of many years of service in the company, caters for any request our customers have regarding the textiles or the installation process. We are not limited to our headquarters and six stores in Spain: In 2010 our first overseas branch in Cancun (Mexico)

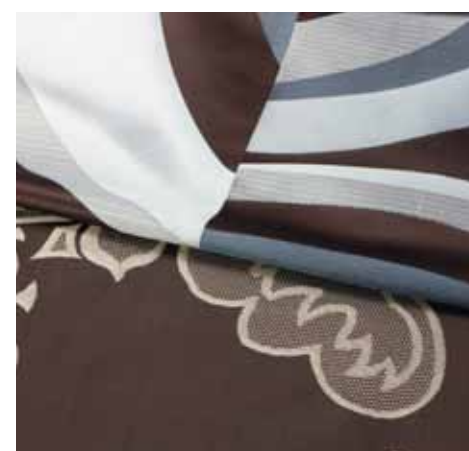
was opened. Here the contract division is working for several Central American projects. We cooperate with many renowned national and international interior designers all over the world. We supply fabrics, wallpapers, carpets, trimmings and furniture for the contract market (incl. the hospitality and automotive sectors) and for residential interiors. Our product range includes jacquards, plains and sheers. We offer full service in turnkey projects and provide support for the private user as well. Our maintenance service is available around the world.

We are very aware of the environment and ship deliveries to our distribution centres via collective transport twice a week. In purchasing we observe ecological standards, especially in packaging, and select our suppliers accordingly. A subcontracting partner takes care of the recycling of used materials and waste. And we use the energy of the sun: Our roofs are covered with solar panels.

Our social projects include sponsorship of the Casa Decor AIDS Support and collaboration with the Terrassa Textile Museum.



**Tapicerías Gancedo SL**  
Spain and Mexico  
Founded in 1945  
60 employees  
Turnover 2012: 7.1 million. €  
[www.gancedo.com](http://www.gancedo.com)



***“The future is to have the vision and the courage to develop innovative textile products.”***

CEO José Gancedo



# Appendix

About Trevira CS

List of Suppliers

The facts speak  
for Trevira CS

The "ecobalance"  
of Trevira

Comparative  
burn test:  
Trevira CS  
versus  
conventional  
textiles





# List of suppliers

## The featured Trevira CS partners

**Création Baumann AG**  
Langenthal / Switzerland  
mail@creationbaumann.com  
www.creationbaumann.com

**drapilux,**  
**Schmitz-Werke GmbH + Co. KG**  
Emsdetten / Germany  
info@schmitz-werke.com  
www.schmitz-werke.com

**Gerriets GmbH**  
Umkirch / Germany  
info@gerriets.com  
www.gerriets.com

**JAB Josef Anstoetz KG**  
Bielefeld / Germany  
jabverkauf@jab.de  
www.jab.de

**Kobefab International BV**  
Valkenswaard / The Netherlands  
contractint@kobe.eu  
www.kobe.eu

**Lelièvre SAS**  
Paris / France  
contact@lelievre.eu  
www.lelievre.eu

**Panaz Ltd.**  
Burnley, Lancashire / UK  
admin@panaz.co.uk  
www.panaz.co.uk

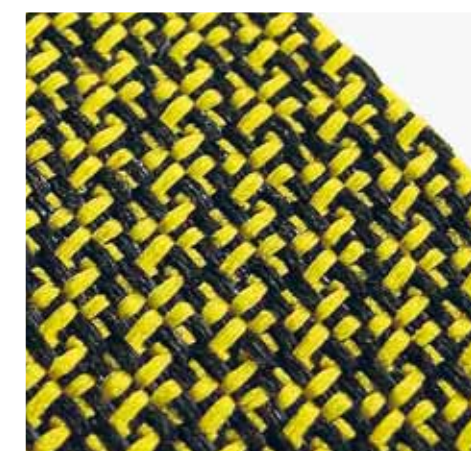
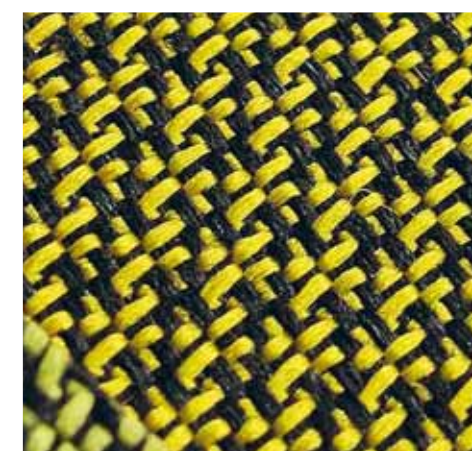
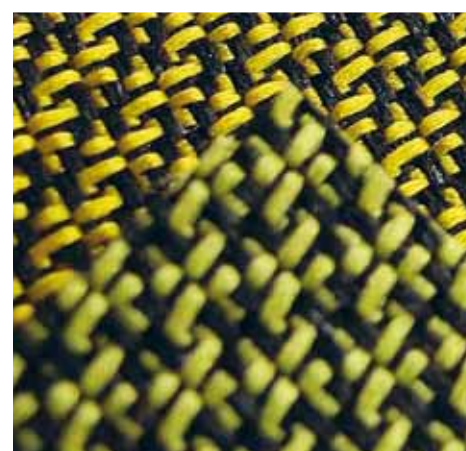
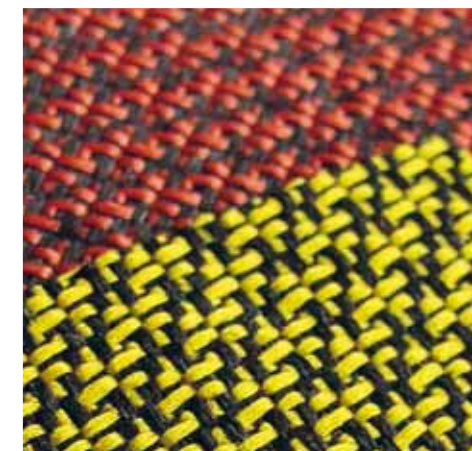
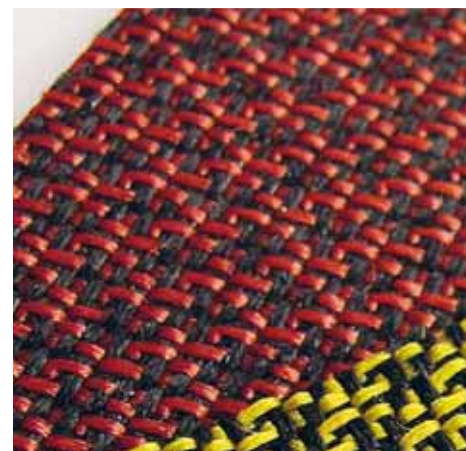
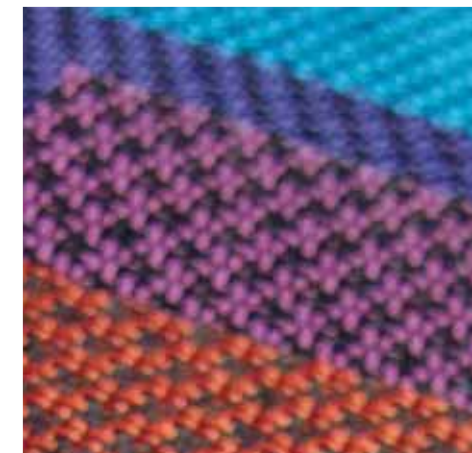
**Rubelli S.p.A.**  
Venice / Italy  
info@rubelli.com  
www.rubelli.com

**Saum & Viebahn GmbH & Co KG**  
Kulmbach / Germany  
service@saum-und-viebahn.de  
www.saum-und-viebahn.de

**SoFarSoNear s.n.c.**  
Milan / Italy  
**SoFarSoNear UK Ltd.**  
London / UK  
info@sofarsonear.com  
www.sofarsonear.com

**Sonnhaus GmbH**  
Wels / Austria  
office@sonnhaus.at  
www.sonnhaus.eu

**Tapicerías Gancedo SL**  
Spain and Mexico  
exports@gancedo.com  
www.gancedo.com



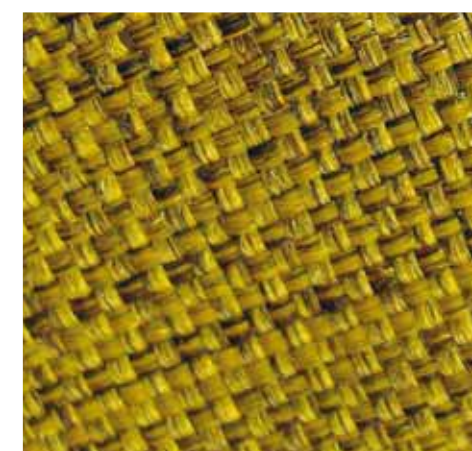
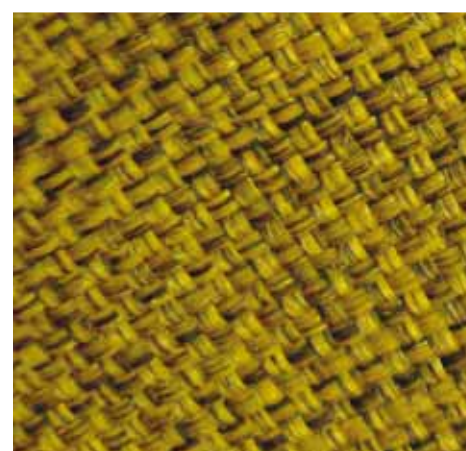
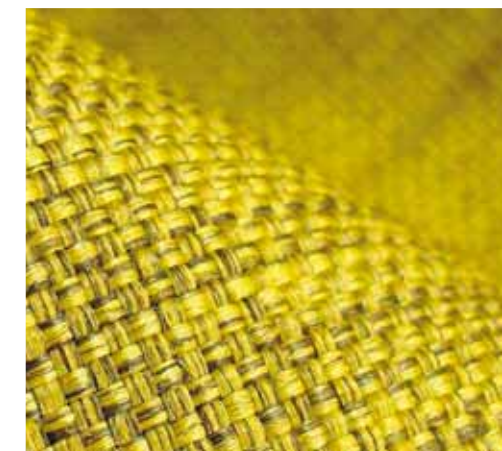
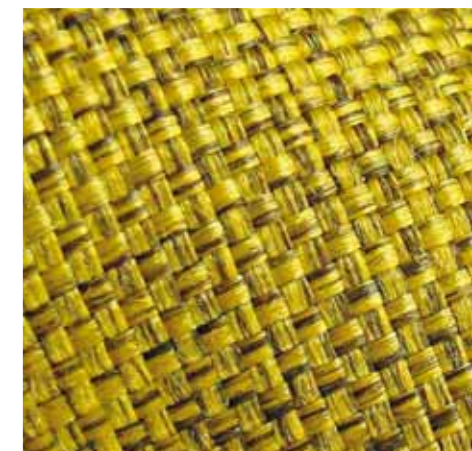
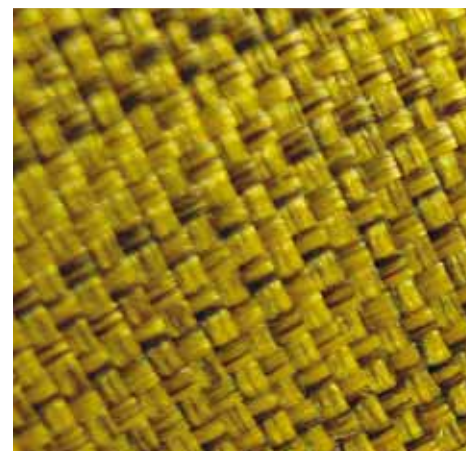
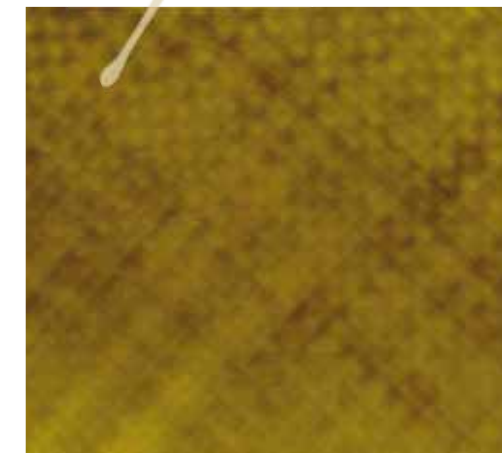
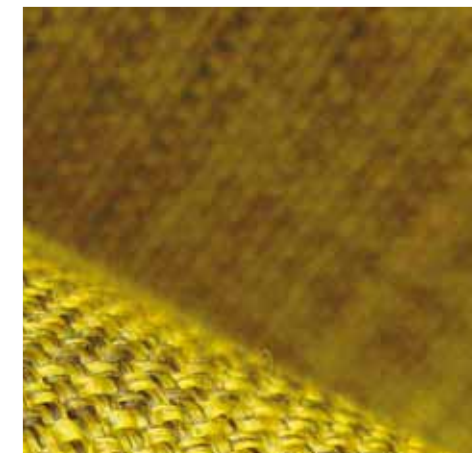
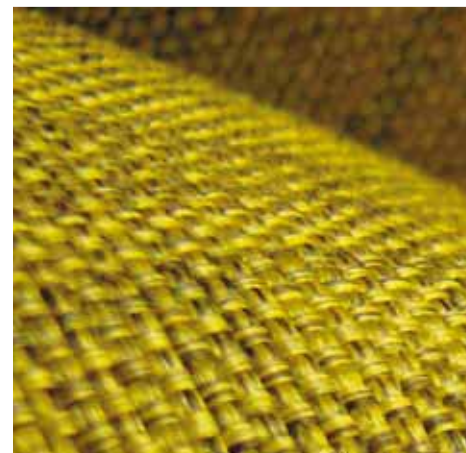


# The facts speak

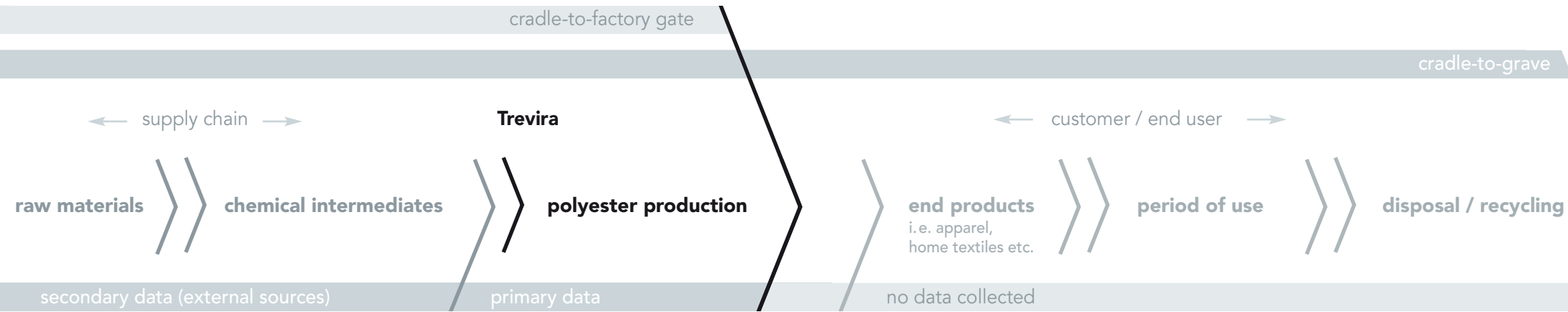
## The advantages of Trevira CS at a glance

- Wide selection of products offering many possible applications: drapes, nets, bedding fabrics, roller and vertical blinds, awnings, room dividers, upholstery fabrics, wall coverings
- Innovative products through continuous development of Trevira fibres and filament types
- Easy care, low-crease and dimensionally stable
- Short wash cycles at low temperatures, saving water, detergent and energy
- Withstands current methods of disinfection
- High colour brilliance and fastness to light
- High abrasion resistance
- Extremely comfortable for upholstered seating due to excellent breathability
- Flame retardant Trevira fibres and filaments are certified to Oeko-Tex Standard 100 (highest classification – also suitable for baby articles)
- Kind to the skin
- Permanent flame retardancy achieved by chemical modification of the polyester molecule is not lost as a result of use, washing or ageing
- Permanently flame retardant without the use of additional finishes
- No after-glow, very low emission of fumes in the event of fire
- Safety based on testing and approval of trademarks
- Meets the important international fire protection standards, e.g. DIN 4102 Part 1/B1; NF P 92503-507/M1; BS 5867, Part 2 Type C; UNI VF 8456/8457/1; EN 1021 Part 1 + 2 and EN 13772 + 13 773 Class 1
- Backed up by general test certification
- Continuous trademark monitoring ensures high quality products
- Ideal for use not only in contract business, but in the private sector as well

# for Trevira CS





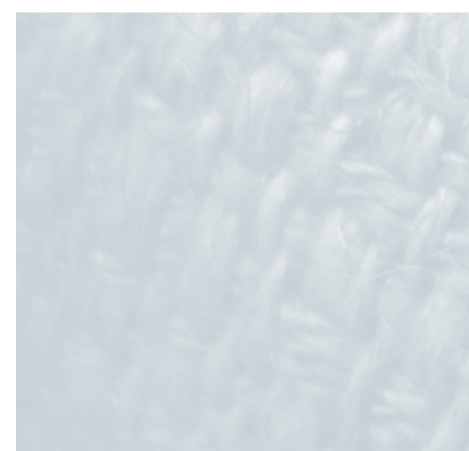


The „Cradle-to-factory gate“ study from Systain assessed the supply chain from raw material exploitation to the Trevira loading ramp.

## Ecobalance: “Cradle-to-factory gate” study compares Trevira to cotton

The results in detail: Trevira staple fibres and filament yarns in comparison with cotton (USA and China)

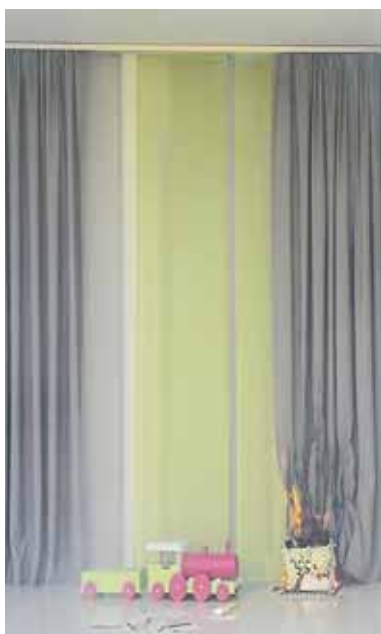
| Impact Category                             | Unit                                  | Staple Fibre            | Filament Yarns          | Cotton US               | Cotton CN               |
|---|---------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Water Use                                   | Litre                                 | 15.0                    | 26.4                    | 1,553                   | 7,442                   |
| Cumulative Energy Demand, non-renewable     | MJ                                    | 89                      | 110                     | 36                      | 31                      |
| Cumulative Energy Demand, renewable         | MJ                                    | 1                       | 3                       | 19                      | 20                      |
| Cumulative Energy Demand, total             | MJ                                    | 90                      | 113                     | 55                      | 51                      |
| Land Use                                    | m <sup>2</sup> /a                     | 0.085                   | 0.133                   | 11.6                    | 7.8                     |
| Global Warming Potential (GWP 100a)         | kg CO <sub>2</sub> -Eq.               | 3.1                     | 4.4                     | 3.1                     | 3.5                     |
| Depletion of Abiotic Resources              | kg Sb-Eq.                             | 0.040                   | 0.048                   | 0.015                   | 0.013                   |
| Stratospheric Ozone Depletion               | kg CFC-11-Eq.                         | 1.41 x 10 <sup>-7</sup> | 2.04 x 10 <sup>-7</sup> | 2.33 x 10 <sup>-7</sup> | 2.66 x 10 <sup>-7</sup> |
| Marine Aquatic Ecotoxicity (MAETP 100a)     | kg 1,4-DCB-Eq.                        | 2.3                     | 4.8                     | 3.0                     | 2.2                     |
| Freshwater Aquatic Ecotoxicity (FAETP 100a) | kg 1,4-DCB-Eq.                        | 0.6                     | 1.3                     | 17.7                    | 0.7                     |
| Terrestrial Ecotoxicity (TAETP 100a)        | kg 1,4-DCB-Eq.                        | 1.42 x 10 <sup>-3</sup> | 2.55 x 10 <sup>-3</sup> | 1.6                     | 0.16                    |
| Human Toxicity (HTP 100a)                   | kg 1,4-DCB-Eq.                        | 0.51                    | 0.68                    | 1.7                     | 0.97                    |
| Ionising Radiation (Summer Smog)            | kg C <sub>2</sub> H <sub>4</sub> -Eq. | 3.13 x 10 <sup>-4</sup> | 3.48 x 10 <sup>-4</sup> | 1.73 x 10 <sup>-4</sup> | 1.28 x 10 <sup>-4</sup> |
| Acidification Potential                     | kg SO <sub>2</sub> -Eq.               | 0.0089                  | 0.011                   | 0.025                   | 0.044                   |
| Eutrophication Potential                    | kg NO <sub>x</sub> -Eq.               | 0.0052                  | 0.0069                  | 0.045                   | 0.101                   |





**Comparative  
burn test:  
Trevira CS  
versus  
conventional  
textiles**

This test shows how flame retardant Trevira CS textiles (left) melt away once the ignition source has been extinguished, while conventional fabrics (right) go completely up in flames.





**Trevira**

THE FIBRE COMPANY

Trevira GmbH  
Philipp-Reis-Str. 2  
65795 Hattersheim  
treviracs.info@trevira.com  
www.treviracs.com

© Trevira GmbH 2014