



TECHTEXTIL NORTH AMERICA SHOWCASE

At the recent Techtextil North America, new technologies, treatments and knitted constructions were abundant. Kathlyn Swantko reports from Atlanta, Georgia.

The opportunity to see the next generation of innovative high-performance textiles drew a large crowd to Atlanta for the fourth edition of Techtextil North America. Hundreds of exhibitors, from the U.S., and more than 25 other countries, featured new developments, trends, and high-end textiles. The event, which ran from March 28 - 30, brought together industry professionals, including engineers, scientists, and other product developers to showcase the latest high-performance materials and technologies that will provide the newness that will drive future textile-

based products.

One of the highlights of the show was the Techtextil Symposium North America program, which brings together international experts and researchers from all segments of the industry to discuss leading-edge technology. After just four events, Techtextil is already recognized as a leading forum for the exchange of ideas, education, and networking. And, the reactions of exhibitors indicated they weren't disappointed with this year's show.

Glenn Runciman, director of sales for **Ultra-Fresh Silpure**, stated, "Ultra-Fresh

Silpure truly received a tremendous response at Techtextil. I have already had discussions with two very large companies that we met at Techtextil. There are dozens more that we will be dealing with over the next week or so."

The following review features some of the knitted fabric highlights showcased at Techtextil North America, along with the fibres/yarns used in the construction of new innovative knitted fabric developments.

Korea Micro Fibre Co., Ltd. (K.M.F.) is a Korean-based circular knitter, which has developed several suede products for a variety of end-use applications

that it says are lower in price than the non-woven suede fabrics available on the market. According to J. H. Lee, overseas department manager, "Our company produces suede fabrics to the highest quality and standards, and we make our products as close to the natural suede as possible. We also have a research center in our facility to continually create new developments."

Featured in the Technology Showcase was the company's newest product, Maxkin, a soft powder-touch micro-suede golf glove. This sueded fabric is made from a blend of 60% - 70% polyester/30% - 40% spandex, and utilises a polyurethane coating to provide water repellent/waterproof qualities. The fabric can be made in weights ranging from 350 to 600 grams/yard. In addition to sport gloves, other end-use applications for the Maxkin fabric include shoes, bags, upholstery, and ready-to-wear.

Other knitted suede products produced by K.M.F. look pretty impressive. The company's CT-3 stretch suede is produced from 80% polyester and 20% PPT (polytrimethylene terephthalate), PTT is available from Shell branded as Corterra. Fabrics were 300gsm. The company offers a range of other lightweight sueded knitted fabrics in a variety of weights and softnesses branded as Mirad, Serad, Kowara, and Delicato.

Taiwan warp knitter

Founded in 1995, **Dern Lin Textile Co.** is a Taiwan-based company which first began its warp knitting business by making fabrics for shoes and caps.



A selection of suede-like jersey fabrics from Korea Micro Fibre company. These realistic and very soft suedes are coated with polyurethane and are said to be cheaper than similar nonwoven suede products.

Today, the company maintains both warp knitting and circular knitting equipment and produces performance knit fabrics for a variety of end-use applications, including apparel, performance sportswear, luggage, and outerwear.

At Techtexil, Dern Lin presented its new Spasoft range of polyester fabrics

targeted towards a variety of applications. For the performance sportswear market Spasoft can be provided with a range of qualities. Spasoft is a moisture absorbing and quick drying fabric utilizing a moisture absorption, sweat dispersion fibre. The uneven shaped cross-section of the fibre draws moisture through capillary



4GG Double knit

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- *Super fine gauge single jersey machine
- *High production with spandex
- *New single jacquard and double jacquard
- *Eight lock machine
- *Single jersey machine
- *Terry machine



Visitors to Techtextil were treated to a variety of knitted technical fabrics

action into the recesses of the fibre. The shape absorbs the moisture and releases it into the air, keeping the wearer cool, dry, and comfortable, with the softness of the fabric next to the skin. Spasoft can also be engineered according to consumer demands, incorporating UV protection and antimicrobial functions into the fibre.

Spasoft can also provide for infrared (FIR) qualities into the fibre. Through the use of absorption and radiation-producing ceramic powders within the fibre, this Spasoft fabric incorporates accumulated heat, warmth, and health protection capabilities into the fibre. Therefore, the fabric can absorb and release FIR for continued warmth, which is also said to provide improvements in the wearer's blood circulation.

French-based **R.Stat** technical fibres has a 30-year history in static protection solutions using a wide product range of metal-coated nylon and polyester fibres. The company used Techtextil to promote its SilveR.STAT, which suffuses pure silver onto the polymer.

Silver is the most conductive natural element on earth, and it has also been used for thousands of years for its antiseptic properties. In SilveR.STAT, the polyamide fibres have been made conductive and antibacterial through the coating of pure silver onto the

polymer. The layer of silver prevents the problems of static electricity and protects against the growth of bacteria and fungi, while the fibre maintains its original characteristics.

Another quality of SilveR.Stat is its anti-static properties. Static electricity is generated at the surface of two substances when they are rubbed together. An anti-static/conductive fibre, like silver, can neutralize this static electricity.

Bacteria and fungi on textiles can also cause fabric discolouration and the formation of odors caused by bacteria. The antibacterial benefits of SilveR.STAT involves silver ions entering the membrane of the bacteria, destroying its cellular structure, and thus preventing the bacteria from developing and multiplying.

SilveR.STAT is targeted towards a wide range of end-use applications, including carpets, protective clothing, hospital textiles, clean-room fabrics, and industrial non-wovens.

Portuguese seamless

Sidonios Malhas Knitwear based in Barcelos, Portugal is a knitter of novelty seamless bodysize garments, which was founded in the mid 80's. Sidonios maintains about 40 circular Santoni machines and semi-automatic sewing machines, and manufactures approximately 11,500 kg of production

per day. The company also has a circular knitting machine plant, but used Techtextil to preview its capabilities of producing high-quality novelty jacquard seamless products, and featured a variety of very interesting novelty sportswear garments.

According to Monica Alves, Sidonios' commercial department representative, the company is equipped with a CAD center for creating new designs in jacquard knitting in colour combinations, stitches, yarns, and textures that correspond to and enhance the latest fashion trends. The company's lab is equipped with sophisticated control machines to test new procedures, and to guarantee the highest possible quality on every garment the company produces.

The Charlotte, North Carolina, manufacturer **Basofil Fibres** is a former division of BASF. Basofil is inherently heat- and flame-resistant for a variety of end-uses, including friction parts, automotive insulation, protective clothing, and home furnishings.

At Techtextil, the company introduced the new Alessandra line of fabrics, manufactured by Cortina Fabrics, which contain Basofil. Alessandra is an economical fabric with flame resistant properties, developed for FR home furnishings market. It is the first fabric that retains the high quality comfort characteristics in mattresses and upholstered furniture, while providing extreme resistance to heat and flame.

Spurred on by legislation passed in California in 2001 requiring all mattresses sold in the state to meet strict flame-resistant requirements, and knowing that California makes up more than 15 % of the national mattress market, Basofil and Cortina saw an opportunity they had to pursue. Because of this landmark mattress flammability legislation, California continues to drive business in this market.

Alessandra's unique patented design begins with dual core and sheath yarn spinning technology. The yarn configuration provides the FR performance. The system works because Basofil fibre in the warp

direction of the knitted fabric stabilizes the carbon char in the fabric, which forms upon flame exposure. This carbon char creates a strong framework that holds the flame barriers in place during the flame impingement. The framework prevents flames from penetrating into the underlying flammable filling materials found in mattresses and furniture.

Besides Alessandra's inherently flame resistant quality, the fabric is also self extinguishing, is free

of toxic chemicals, is non-yellowing, and is easy to cut/quilt. The Alessandra fabric is available in knitted tubes, knitted sleeves, Mattelasse tickings, woven tickings, woven barriers, covers, pillow ticking, and thread.

Hailing from Toronto, **Thomson Research Associates** is a Canadian company known for its antibacterial and antifungal treatment since it first launched its Ultra-Fresh product in 1955. Now, over 50 years later, Thomson Research took the opportunity at Techtextil to introduce its latest antimicrobial development, Ultra-Fresh Silpure, for textile applications. The silver technology used in Silpure is a result of the partnership between Thomson Research and an unnamed world expert in silver technology. Through this partnership, a new processing technology has been developed, which incorporates a combination of advanced nanotechnology in silver processing and the proven Ultra-Fresh treatment procedures, which results in a reliable, more affordable supply of the finest -quality silver antimicrobial treatment for textiles. As a result, silver-based antimicrobial treatments can be cost-effectively moved out of small niche markets into mainstream consumer products.

Ultra-Fresh Silpure's antimicrobial protection is active for the life of the fabric. According to Glenn Runciman, director of sales for Thomson, even on 100% polyester, one of the more difficult fabrics to treat, the wash durability is excellent. And, since Ultra-Fresh Silpure limits the growth of bacteria, it also reduces the perspiration odors generated by the bacteria, which is especially important for active sportswear applications.

Runciman noted, "Compared to earlier silver antimicrobials where the treated and untreated fibres had to be blended together for cost reasons, giving only partial antimicrobial protection, Ultra-Fresh Silpure is applied in the textile plant padding process, which enables every fibre in the fabric to be treated. Ultra-Fresh Silpure is consistently effective, and does not cause discolouration." **KI**



A novelty sportswear garment from Portuguese seamless knitter Sidonios.

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