Technical TEXTILES international

Autumn 2025
Volume 34, Number 3

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In the Editor's opinion

Industry events provide an essential forum for colleagues and competitors alike to share information, discuss the state of the industry and make predictions for the future. Given the current global economic turbulence affecting large swathes of the manufacturing sector, caused by pandemic hangovers, wars in Ukraine and the Middle East, high energy costs and interest rates, and uncertainties over tariffs in the USA, these events are more important than ever. The showfloor at *Techtextil North America (TTNA)*, which took place in Atlanta, Georgia, USA, on 6–8 May 2025, provided good insight into the problems, and opportunities, currently presented to the technical textiles industry in the USA, and across the world.

There was much uncertainty among attendees. The 'T word' was high on the agenda of many visitors and exhibitors. At the time of the show, sweeping changes were – and still are – taking place to US tariff policy. As such, speculation was rife.

Talking to attendees, a number of themes emerged. For many machinery manufactures, for instance, the economic climate appears to be stalling business, with many of their customers taking a 'wait-and-see' approach with regard to pushing on with capital investments. Even so, interest in innovation and new technologies remained high. Further, many manufacturers of textiles themselves reported good sales.

With regard to tariffs, US companies seemed gently optimistic that things might settle down. Most were looking at ways to minimise disruption in the near- and long-term, with much talk of re- and near-shoring production to the USA. European companies, on the other hand, were wrestling with the potential increases in the costs of their products if the tariffs persisted.

Several months later, and the economic picture remains uncertain. As such, it is the perfect time for the industry to get together at *ITMA Asia + CITME*. In Singapore on 28–31 October, manufacturers of machinery for the textiles industry will showcase their latest innovations for increasing the efficiency and reducing the environmental impact of the operations of their customers. Our preview of the show starts on page 21.

Elsewhere in the issue, we examine other challenges faced by the textiles industry. The European Union (EU) has already introduced a raft of legislation designed to reduce the environmental impact of the textiles industry. In January 2025, for instance, a ban on the incineration or landfilling of waste clothing and textiles within EU member states was implemented. Currently, however, only 1% of the 6-7 Mt of textile waste generated in the EU each year is converted into fibres. As they look for ways to accelerate the development of the fibre-to-fibre (F2F) recycling industry, legislators in the European Union (EU) are now considering the introduction of regulations stipulating a mandatory percentage of recycled content in all new fabrics entering the single market. As Adrian Wilson reports (starting on page 11), the idea is being proposed by the T2T Alliance, which was established in May 2025 by textile-recycling companies such as Circ, Circulose, Re&Up, Samsara Eco and Syre.

Finally, we have a tale of innovation. After more than two years of research and development work, Avient has unveiled a multilayered ultra-high molecular-weight polyethylene (UHMWPE, Dyneema) fabric that is lightweight, and is highly resistant to tearing and abrasion. This fabric is now being used by Hyperlite Mountain Gear to manufacture backpacks for hikers. Starting on page 17, our USA Correspondent John McCurry speaks to the key people involved with the project to find-out more.

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A newly formed alliance has outlined its arguments for taking bold steps to accelerate the development of the fibre-to-fibre recycling industry. Adrian Wilson reports, starting on page 11.

A multilayered Dyneema fabric is now being used by Hyperlite Mountain Gear to manufacture backpacks for hikers. John McCurry spoke to the key people involved with the project to find-out more, starting on page 17.

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Further information at https://www.technical-textiles.net

INDA and EDANA approve foundation of the Global Nonwoven Alliance

The Boards of Directors of The Association of the Nonwoven Fabrics Industry (INDA) and EDANA at a meeting in late April 2025.

The Boards of Directors of The Association of the Nonwoven Fabrics Industry (INDA) and EDANA have approved the foundation of the Global Nonwoven Alliance (GNA), with both organisations becoming founding members.

The Boards met in late April 2025 to continue discussions about a broad collaboration first detailed in a letter of intent signed by the organisations, of Cary, North Carolina, USA, and Brussels, Belgium, respectively, in September 2024[1].

The GNA will be established as a non-profit association under the laws of the USA and will be governed by a Board composed of six members from each founding organisation; five appointed representatives plus the current Chair.

The purpose of the GNA is to provide international representation for the global nonwovens industry.

Both associations believe that there is a need for a unified approach to navigate complicated international markets and say that, by pooling their resources, they will be able to deliver greater value to their members. An alliance would also give them a collective voice, enhancing their ability to advocate for their members at local, regional and global levels. Further, it would make the organisations more efficient and improve their expertise.

INDA and EDANA will continue to operate as independent legal entities, maintaining their regional focus and advocacy efforts.

INDA and EDANA will initially focus on establishing the GNA and its governance structure. Looking ahead, allied membership is expected to be open to any not-for-profit trade, industry or professional association whose mission aligns with that of the founding members.

The President of INDA, Tony Fragnito, says: "The formation of the GNA is a milestone for our industry. By working together across regions, we can accelerate innovation, speak with a stronger voice globally, and deliver even greater value to our members. This is not a merger—it is a strategic alliance built on mutual respect and a shared commitment to the future of nonwovens."

The General Manager of EDANA, Murat Dogru, concludes: "With the creation of the GNA, we are positioning the nonwovens industry to meet global challenges with greater unity and impact, This collaborative structure allows us to scale our efforts, strengthen our influence, and pursue solutions that benefit our members."

See also: [1]*INDA and EDANA plan to establish Global Nonwoven Alliance*, https://www.technical-textiles.net/node/77759

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Sandler invests in wet-laid nonwovens specialist

Sandler AG has acquired a 24.9% stake in manufacturer of high-performance nonwovens using wet-laid processes, Phoenix Non Woven GmbH & Co KG, for what it describes as a "low single-digit million-Euro figure".

Based in Lenningen, Germany, Phoenix is a spin-off from the Scheufelen paper factory, which closed-down in 2019. Its wet-laid technologies, which draw on principles similar to those employed for the production of paper, enable the use of a diverse array of fibres – including high-performance synthetics – to manufacture technical nonwovens. Such nonwovens could be used in, for instance, batteries and fuel cells.

Sandler, of Schwarzenbach/Saale, Germany, says that its investment in Phoenix will enhance its existing capabilities and will allow it to enter new, high-growth markets. A team of specialists from the two companies will now work to develop advanced technical nonwovens from materials new to Sandler, such as aerogels, ceramics, carbon and metals.

Member of Sandler's Management Board and Chief Commercial Officer (CCO), Ulrich Hornfeck, says: "Phoenix will remain an independent entity, ensuring it retains the creative freedom needed to drive innovation. We will support the company by contributing our sales expertise and experience in market development."

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DiloGroup needling line for floorcoverings starts-up in Italy

DiloGroup has installed a needling line for the production of floorcoverings at the facility of Alma SpA in Florence, Italy.

Alma manufactures exhibition carpet, artificial grass, automotive interiors and car mats, and floorcoverings for homes from polypropylene (PP) fibres that it produces in-house. To ensure that it can meet the requirements of its customers for quality and cost, the company has purchased a new needling line from DiloGroup, which has been installed by DiloSystems GmbH, of Eberbach, Germany.

The line comprises a fibre-blending and filtration system from DiloTemafa, of Bergisch Gladbach, Germany, carding system from DiloSpinnbau, of Bremen, Germany, and a high-speed crosslapping system from DiloMachines of Eberbach. The line is designed for the manufacture of products of 6 m in width and will be completed with a high-speed DI-LOOP machine.

DiloGroup's needling line for the production of floorcoverings at the facility of Alma SpA in Florence, Italy.

According to Alma, its operating and maintenance department, working with DiloGroup's field service and installation team, installed and started-up the line efficiently. It is currently able to run at full capacity.

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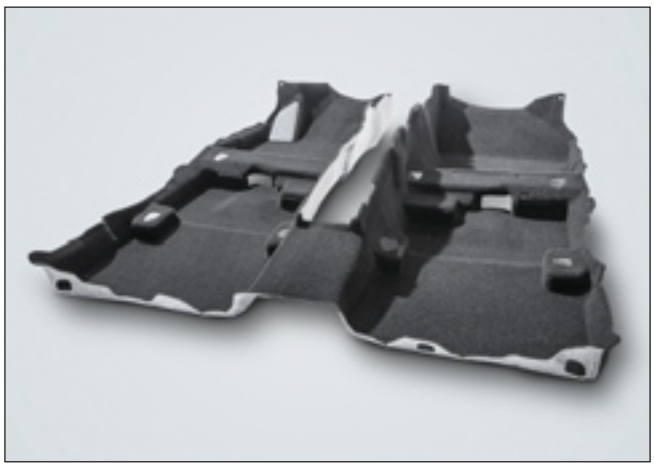
Autoneum launches recyclable, adhesive-free carpet for vehicles



Autoneum says that its N-Join1 carpet system, shown here, is produced using a process whereby the carpet surface is joined to the substrate in a single step, and that it is easy to recycle.

A monomaterial carpet system for vehicles that does not require the use of latex and adhesives to manufacture or install has been launched by Autoneum, of Winterthur, Switzerland.

The company says that, owing to its construction, the carbon footprint of the carpet system, called N-Join1, is significantly smaller than traditional carpet systems of equal weight. First, N-Join1 is produced using a process whereby the carpet surface is joined to the substrate in a single step. The substrate can be made from various materials, including polyester (PES), making N-Join1 easier to recycle than multimaterial carpet systems. Second, no latex, which is water- and energy-intensive to produce, is used in the construction of the carpet system.

N-Join1 can be used together with Autoneum's multi-layered tufted and needlepunched carpet systems made entirely from PES (Di-Light)[(1)], which has an attractive appearance even in highly contoured areas of vehicle interiors.

N-Join1 is suitable for use in a wide range of vehicles, including both internal combustion engine (ICE) vehicles and battery electric vehicles (BEVs). It is currently available in Europe and North America.

See also: [(1)]*Autoneum unveils easy-to-recycle automotive carpet systems*, https://www.technical-textiles.net/node/76990

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Need for battery separators to drive demand for wetlaid nonwovens

The value of the market for nonwoven battery separators, currently worth US$1.7 billion, will more than double to US$3.9 billion in 2030, according to a new report from market research company Smithers.

The company, of Leatherhead, UK, and Akron, Ohio, USA, says that the quantity of nonwovens by surface area employed in battery separators will double across the same time period from eight billion square metres to 16 billion square metres—representing a compound annual growth rate (CAGR) of 14.7%.

According to Smithers, demand for nonwoven battery separators will be driven by a transition away from fossil-fuel-based energy sources and the adoption of more complex, higher-performance batteries. While lower-cost nonwovens will continue to find applications in conventional lead-acid, nickel-cadmium, and nickel-metal hydride batteries, the greatest opportunity for the producers of nonwovens will be in the next generation of lithium-ion cells.

Lithium-ion cells will be used widely by the automotive industry to power electric and hybrid vehicles. High petrol prices, government subsidies and technical improvements are all driving sales of electric vehicles. In response, across the Smithers forecast period, demand for nonwovens for lithium-ion cells will increase by a factor of more than five by volume.

Alongside organic growth into consumer electronics, the other main driver of demand for nonwoven battery separators will be advanced energy-storage systems. This reflects the evolution of the infra-structure for power grids, including the requirement to integrate and store electricity from distributed solar and wind generation sites, providing more effective back-up power systems, and enabling the smarter distribution of power during times of high and low demand.

The main beneficiaries of these trends will be producers of wetlaid nonwovens, according to Smithers. Accounting for 75.2% of the contemporary market by value, the arrival of more high-performance wetlaid materials for lithium-ion batteries will see the market share for these fabrics increase to 85.5% in 2030. There will be a corresponding drop in sales for spunlaid and drylaid variants, which are confined largely to less complex cell designs.

This impetus will also challenge the nonwovens industry, which will have to increase its capacity for the production of polyamide (PA) and short-cut (shorter than 12 mm) PA fibres, microfibre polyester (PES), and fibrillated lyocell materials, and ensure their supply into key end-use regions, especially in East Asia. This will affect costs and pricing as, for example, short-cutting fibres raises production costs by 20–40%.

The full report, entitled *The Future of Nonwoven Battery Separators to 2030*[(1)], is available for purchase now.

See also: [(1)]https://www.smithers.com/services/market-reports/nonwovens/the-future-of-nonwoven-battery-separators-to-2030

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Lightweight and pliable polyester acoustic insulation for vehicles

A polyester (PES)-based, acoustically insulating felt that is lightweight, resilient and pliable, meaning that it can conform tightly to the contours of a vehicle's interior, has been launched by Autoneum.

The company, of Winterthur, Switzerland, says that the felt, called Flexi-Light PET, is manufactured from a blend of fibres that are made primarily (up to 90%) from polyethylene terephthalate (PET). By using a process that enables it to adjust the orientation of the fibres within the felt, Autoneum says that it is able to ensure that the mechanical and acoustic properties of the material are similar to those of polyurethane (PU) foam.

Further, the felt is flexible and can be moulded into three-dimensional shapes, making it suitable for insulating interior components with complex contours, such as carpets and inner dashes.

Flexi-Light PET can be used as a decoupler in conjunction with Autoneum's other PET-based materials, allowing for any production waste to be re-used and for the materials to be recycled at the end of their lives.

Flexi-Light PET is a lightweight, resilient and pliable felt, meaning that it can conform tightly to the contours of a vehicle's interior.

Flexi-Light PET is an iteration of Autoneum's Flexi-Loft technology, which was launched in 2021[(1)]. Flexi-Light PET is currently available worldwide as insulation for automotive carpets.

See also: [(1)]*Sound-absorbing felt conforms to complex geometries*, https://www.technical-textiles.net/node/76499

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Estonian automotive supplier orders needlepunch line from Andritz

Mistra-Autex AS' facility in Raasiku, Estonia.

Andritz is to supply a complete needlepunch line to Mistra-Autex AS, which will use the equipment to produce nonwovens for the automotive industry.

Founded in 1986 and based in Raasiku, Estonia, Mistra-Autex AS manufactures carpets and moulded nonwoven parts for automotive interiors. The installation of the needlepunch line from Andritz, of Graz, Austria, will enable the Estonian company to increase its productivity five-fold. The start-up of the line is scheduled for the end of the third quarter of 2026.

The line will include Andritz's cross-laying technology, the ProWin system. By uniting its ProWid and ProDyn technologies, Andritz says that ProWin produces homogeneous webs and can reduce the input of raw materials required. ProWin enables a machine to run faster while generating less mechanical stress, and can be retrofitted to recent ProDyn installations.

Mistra-Autex's Research and Development Director, Mark Raja, says: "Andritz's technology ensures excellent product quality while increasing line speed and reducing operational costs. The ProWin system reduces fibre deposits at the web edges and optimises the [coefficient of variation] CV ratio. This results in up to 10% fibre savings and higher production speeds, providing a faster [return on investment] ROI."

The value of the order will not be disclosed.

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Nonwovenn invests in medical manufacturing facility

Nonwovenn has constructed a medical manufacturing facility at its headquarters in Bridgewater, UK, as part of a significant investment it is making in its medical technologies division.

The company has implemented a three-year growth plan for its medical technologies division, with the aim of increasing the division's sales by 14% a year.

The medical manufacturing facility features a cleanroom designed to meet stringent medical-industry standards. The construction of the facility was supported by a joint investment from one of Nonwovenn's key customers in the medical sector.

In the last 12 months, Nonwovenn's research and development (R&D) team has developed x-ray-detectable materials to enhance their safety and traceability in surgical applications, and a reinforced carboxymethylcellulose (CMC) hydrofibre that is durable and absorbent for use in wound care.

The team has also developed a translucent nonwoven for use as a surgical-site dressing scaffold to allow for the visual inspection of incision sites without the need to remove the dressing.

Alongside its investment in infrastructure and its product development, Nonwovenn has strengthened its team with the appointment of Ross Ward (the former Chief Commercial Officer for Nonwovens Innovation & Research Institute Ltd, of Leeds, UK[(1)]) as Business Director of Carbon.

Medical Business Director at Nonwovenn, John Birkett, says: "We are very proud to be able to strengthen our capabilities in advanced medical materials, thanks to this world-class suite. The investment reflects our commitment to quality, innovation and continuing to serve the evolving needs of our partners in the sector across the UK, Europe and Middle East."

See also: [(1)]*NIRI opens new headquarters*, https://www.technical-textiles.net/node/77238

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Molecular filtration line started-up by Ahlstrom

Ahlstrom has started-up a line for the production of molecular filtration media at its site in Turin, Italy.

The line will manufacture high-performance adsorbent materials for premium filtration applications, including the purification of cabin air and of the air intake of fuel cells, cleanrooms, and for heating, ventilation and air conditioning (HVAC) systems. Ahlstrom, of Helsinki, Finland, says that, using the line, the adsorptive performance of filter media can be tuned through the detailed control of the types, blends and volumes of adsorbents employed. The line is complemented by a test bench that Ahlstrom's customers can use in the development of their media.

Molecular filtration media remove gaseous pollutants, including volatile organic compounds (VOCs), inorganic gases (such as sulfur dioxide, nitrogen oxides and ammonia) and odours, from air.

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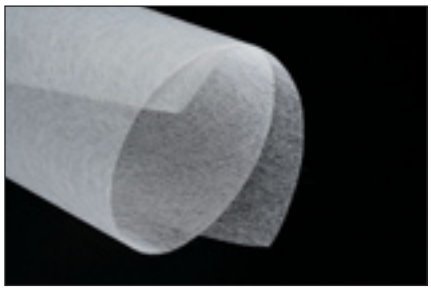
Testing proves that polyester veils are safe for human contact

A range of lightweight polyester (PES) veils (Optiveil) from James Cropper Advanced Materials has passed medical testing that confirms the safety of the nonwovens for human contact and their suitability for use in wearable medical devices.

The nonwovens, an example of which is shown on the right, have been put through an *in vitro* cytotoxicity study in accordance with ISO 10993-5[(1)], the international standard (from the International Organization for Standardization (ISO), of Geneva, Switzerland) for the biological evaluation of medical devices. Through the study, the potential for cytotoxic effects from direct contact with the PES veil has been assessed. The veil passed all testing criteria, demonstrating that it does not cause any adverse cellular reactions.

Innovation Director at Kendal, UK-based James Cropper Advanced Materials, Mandy Clement, says: "Our OptIveil PES veils are now validated for use in sensitive medical environments, including wearable technologies."

James Cropper Advanced Materials says that the OptIveil nonwovens are skin-friendly, breathable and durable, making them suitable for use in the production of medical devices that are worn for long periods of time. The uniform thickness and flexibility of the veils aid the production of pressure-sensitive adhesives and adhesive patches, while their mechanical strength enables their integration with embedded electronics in devices such as biosensors, smart bandages and therapeutic patches.



See also: [(1)]ISO 10993-5:2009, *Biological evaluation of medical devices, Part 5: Tests* for in vitro cytotoxicity, https://www.iso.org/standard/36406.html

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Breathing easy with novel wetlaid polyester filter media

A nonwoven filter media that can capture particles of several tens-of-nanometres in size (smaller than viruses) without greatly restricting airflow is being developed for use in such as face masks by researchers in Japan.

The media created by a team at the University of Tokyo comprises a 30 $g.m^{-2}$ wetlaid polyethylene terephthalate (PET) nonwoven onto which polyurethane (PU) nanofibres are elctrospun.

On top of this nonwoven is stamped an ordered mesh comprising porphyrins, which are flat, ring-shaped molecules with central holes. The holes in the porphyrin molecules are suitably sized to allow for the easy passage of the small gas molecules in air, while blocking the movement of larger particles, such as viruses.

The team has tested its filter using the standard procedure for testing N95 face masks[(1)]. The results of the particle-filtration tests revealed that the filter effectively trapped particles that were as small as viruses. The filter achieved a particle-filtration efficiency of 96%, which exceeds the requirement of 95% for an N95 face mask.

University of Tokyo Professor, Kazuyuki Ishii, concludes: "Our porphyrin-based filter collected nanoparticles with a diameter as small as one-hundred nanometres. Importantly, the filter also showed minimal decrease of differential pressure in gas-flow measurements. This indicates that the filter is capable of trapping particles as small as viruses, while barely restricting air flow."

See also: [(1)]N95 face masks are capable of filtering at least 95% of particles of 0.3 µm and above.

Materials Advances, *Hybridization of nanofiber-modified fabrics with porphyrin-based nanosheets for nanoparticle capture*, https://doi.org/10.1039/D5MA00058K

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Lightweight geotextiles can be made from superabsorbent fibres

A fabric made from superabsorbent fibres (SAFs) that self-heals in a similar manner to the bentonite-based geotextiles used for such as landfill-containment sites is being developed by Technical Absorbents Ltd (TAL).

The company, of Grimsby, UK, says that its SAF fabrics absorb water as well as, or even better than, bentonite-based geotextiles, which are made by sandwiching the clay mineral sodium bentonite – a natural sealant that swells on contact with water – between a woven and a nonwoven fabric, and then needlepunching the layers together.

Further, TAL claims that its SAF fabrics are light in weight, which makes them easier and more cost-effective to ship and install than conventional alternatives. The SAF-containing nonwovens are also cleaner because the fibres are fully integrated within the fabric, so they do not create dust or shed fibres, which also helps to ensure that they create a consistent water-barrier.

TAL has conducted basic tests to show how fabrics made from its SAFs, which can absorb up to 200 times their own weight in water, even under pressure, perform in comparison with standard bentonite clay liners. Both fabrics were placed in the same test rig, and equal amounts of water were applied. The water flowed through the bentonite clay fabric, but the SAF fabric absorbed and retained the water instantaneously. In industry-standard comparison tests conducted by an external laboratory, the SAF fabrics performed just as well as the bentonite clay samples.

TAL's Commercial Director, Paul Rushton, says: "We are not trying to replace bentonite clay fabrics; we see SAF as an alternative, or even a complementary option, that could bring added value in the right applications. There is also a potential benefit in producing hybrid systems of both bentonite and SAF to maximise transportation and installation costs. Right now, we are looking to connect with companies who already manufacture fabrics in this space and might be interested in working with our technology."

TAL's SAFs are already used in cables and in structural waterproofing membranes. Yarns and tapes made with SAFs are installed inside cables and, if the outer sheath gets damaged, they absorb water and swell to block any further ingress. Needlepunched nonwoven fabrics made with SAFs are also used by customers as a secondary protection layer in structural waterproofing membranes, where they provide a thin and cost-effective extra layer of protection against below-grade water-entry. When bonded to a high-density polyethylene (HDPE) waterproof membrane, the integrated SAFs will swell upon contact with groundwater if the membrane is breached in any way.

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Freudenberg unveils versatile fine-denier spunbond nonwovens

A range of fine-denier spunbond nonwovens has been developed for use in construction, filtration and coating applications by Freudenberg Performance Materials of Weinheim, Germany.

The company says that the nonwovens could find use in roofing membranes, liquid-filtration products and artificial turf. They can be made from monomaterial or bicomponent fibres of polyethylene terephthalate (PET), polyethylene (PE) or polypropylene (PP), or combinations of these. The fibres can have titers of 2.5–3 dtex and the resulting nonwovens can have areal densities of 17–140 $g.m^{-2}$. The nonwovens are bonded strongly using flat calendering or point sealing and, according to Freudenberg Performance Materials, they demonstrate high tensile and tear strengths, and have smooth and uniform surfaces.

For construction applications, roofing and façade membranes, vapour barriers and house wrappings, for instance, the nonwovens are resistant to tears caused by penetration by nails and, as they can be made from PET, they are resistant to, and stable when exposed to, ultraviolet (UV) radiation and variations in temperature.

The fine denier and regular surface of the nonwovens makes them suitable for use in the filtration of liquids, such as coolants and lubricants, and they can be used as support media for glass fibres, nano-materials and activated carbon.

Fine-denier nonwovens made from PET/PE could be used to produce desiccant bags and other products for use in dehumidifier products. They enable the efficient and fast manufacture of such bags, as they can be processed using hot sealing processes, without the need for chemical binders or additional treatments, and the high strength, abrasion-resistance and durability of the nonwovens ensures that the bags will last for extended periods of time.

The chemical-resistant and thermally stable nonwovens can also be used as coating substrates, owing to their smooth and even surface. The variety of polymers, fibre types and bonding processes that can be used for the construction of the nonwovens enables them to be tailored for coating, laminating and concealing applications. For example, a lightweight, flat-bonded variant of the nonwoven is a suitable coating substrate for cold wax depilatory strips, providing the necessary high mechanical strength and flexibility.

Other applications for Freudenberg Performance Materials' fine-denier nonwovens include crop covers and decorative items.

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Creating a full-value supply chain for fibre-to-fibre textile recycling

Legislators in Europe view extended producer responsibility (EPR) programmes as a major lever for closing the gap between the supply of, and demand for, textile waste. At the inaugural edition of the *Textiles Recycling Expo* in June 2025, however, a newly formed alliance of textiles recyclers outlined its arguments for taking bolder steps. Adrian Wilson reports.

The European Union (EU) has already introduced a raft of legislation designed to reduce the environmental impact of the textiles industry. In January 2025, for instance, a ban on the incineration or landfilling of waste clothing and textiles within EU member states was implemented. Extended producer responsibility (EPR) programmes, which mandate that producers and retailers of clothing must contribute to the costs of the collection and resale/recycling of their end-of-life products, are also being introduced in member states.

Currently, only 1% of the 6-7 Mt of textile waste generated in the EU each year is converted into fibres. As they look for ways to accelerate the development of

At its site in Gazientep, Turkey, Re&Up is establishing two separate lines for the recycling of both cotton and polyester textiles such as these (see also, page 13).

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October 2025

Textile Discovery Summit
5–7 October 2025
Savannah, Georgia, USA
Kim Nicholson, AATCC;
Tel: +1 (919) 549-8141
education-dept@aatcc.org;
https://aatcc.org/events

Research, Innovation and Science for Engineered Fabrics (RISE) 2025
14–15 October 2025
Raleigh, North Carolina, USA
MIsty Ayers, Marketing Coordinator, INDA (Association of the Nonwoven Fabrics Industry);
Tel: +1 (919) 459-3712
mayers@inda.org;
https://www.riseconf.net

Railway Interior Innovation Summit
28–30 October 2025
Palermo, Italy
Andreas Wibowo, Business Development Manager, Red Cabin;
Tel: +49 (162) 256-7382
andreas.wibowo@redcabin.de;
http://redcabin.de

ITMA Asia + CITME
28–31 October 2025
Singapore
Daphne Poon, ITMA Services;
Tel: +65 9478-9543
daphnepoon@itma.com;
https://www.itmaasia.com

Advanced Engineering
29–30 October 2025
Birmingham, UK
Alison Willis, Divisional Director, Easy Fairs;
Tel: +44 (20) 3196-4303
alison.willis@easyfairs.com;
https://www.advancedengineeringuk.com

PCIAW Summit
29–30 October 2025
London, UK
Yvette Ashby, Chief Executive Officer, Professional Clothing Industry Association Worldwide;
Tel: +44 (1908) 411415
yvette@pciaw.org;
https://pciaw.org/summit

Performance Days
29–30 October 2025
Munich, Germany
Design and Development GmbH Textile Consult;
Tel: +49 (89) 9394-6060
info@performancedays.com;
https://www.performancedays.com

November 2025

26th Annual Carbon Fiber Conference
4–6 November 2025
Witchita, Kansas, USA
Tara Grogan, Conference Manager, Gardner Business Media, Inc
tgrogan@gardnerweb.com;
https://www.carbonfiberevent.com/

Advanced Textiles Expo
5–7 November 2025
Indianapolis, Indiana, USA
Amy Collins, Advanced Textiles Association;
Tel: +1 651 225 6970
amy.collins@textiles.org;
https://www.textiles.org/event/ifai-expo-2023

GO Wipes Europe
12–13 November 2025
Vienna, Austria
Ellie Baker, Events and Sponsorship Sales, Smithers;
Tel: +44 (1372) 802291
ebaker@smithers.com;
https://www.go-wipes.com

Hygienix
17–20 November 2025
Orlando, Florida, USA
Tracie Leatham, INDA (Association of the Nonwoven Fabrics Industry);
Tel: +1 (919) 459-3726
tleatham@inda.org;
https://www.hygienix.org

Space Tech Expo Europe
18–20 November 2025
Bremen, Germany
Gordon McHattie, Event Director, Smarter Shows;
Tel: +44 (1273) 916309
gordon.mchattie@smartershows.com;
http://www.spacetechexpo.eu

Milipol Paris
18–21 November 2025
Paris, France
Comexposium
sales@milipol.com;
https://en.milipol.com

Aachen-Dresden-Denkendorf International Textile Conference
27 November–28 November 2025
Aachen, Germany
Sabine Keller, Deutsche Institute für Textil- und Faserforschung Denkendorf (DITF);
Tel: +49 (711) 9340-505
add-itc-2020@ditf.de;
https://www.aachen-dresden-denkendorf.de/en/itc

ISPO Munich
30 November–2 December 2025
Munich, Germany
Sabine Wagner, ISPO;
Tel: +49 (89) 949-20802
sabine.wagner@messe-muenchen.de;
https://www.ispo.com/en/munich

January 2026

Heimtextil
13–16 January 2026
Frankfurt, Germany
Bettina Bär, Messe Frankfurt Exhibition GmbH;
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bettina.baer@messefrankfurt.com;
https://heimtextil.messefrankfurt.com

Domotex
19–22 January 2026
Hannover, Germany
Sonia Wedell-Castellano, Deutsche Messe;
Tel: +49 (511) 893-32130
info@messe.de;
https://www.domotex.de

Wearable Expo
21–23 January 2026
Tokyo, Japan
Reed Exhibitions Japan Ltd;
Tel: +81 (3) 3349-8502;
Fax: +81 (3) 3349-4900;
wearable-eng@reedexpo.co.jp;
https://www.wearable-expo.jp

March 2026

JEC World
10–12 March 2026
Paris, France and online
Farah Boudjemia, JEC Composites;
Tel: +33 (1) 5836-4399;
Fax: +33 (1) 5836-1513;
boudjemia@jeccomposites.com;
http://www.jeccomposites.com

Intertextile Shanghai Home Textiles
11–13 March 2026
Shanghai, China
Rita Li, Messe Frankfurt (HK) Ltd;
Tel: +852 223-9966;
Fax: +852 2598-8771;
rita.li@hongkong.messefrankfurt.com;
https://intertextilehome.hk.messefrankfurt.com/china/en.html

Yarn Expo Spring
11–13 March 2026
Shanghai, China
Rita Li, Messe Frankfurt (HK) Ltd;
Tel: +852 223-9966;
Fax: +852 2598-8771;
rita.li@hongkong.messefrankfurt.com;
https://intertextilehome.hk.messefrankfurt.com/china/en.html

Performance Days
18–19 March 2026
Munich, Germany
Design and Development GmbH Textile Consult;
Tel: 49 (89) 9394-6060
info@performancedays.com;
https://www.performancedays.com

April 2026

Aircraft Interiors Expo
14–16 April 2026
Hamburg, Germany
Polly Magraw, Reed Exhibitions Ltd;
Tel: +44 (20) 8271-2174
polly.magraw@rxglobal.com;
https://www.aircraftinteriorsexpo.com

Techtextil
21–24 April 2026
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ivonne.seifert@messefrankfurt.com;
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Texprocess
21–24 April 2026
Frankfurt, Germany
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ivonne.seifert@messefrankfurt.com;
https://texprocess.messefrankfurt.com

May 2026

FESPA Global Print Expo
19–22 May 2026
Barcelona, Spain
Leighona Aris, FESPA;
Tel: +44 (1737) 228160
Leighona.Aris@Fespa.com;
www.fespa.com

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19–22 May 2026
Geneva, Switzerland
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index@palexpo.ch;
https://www.indexnonwovens.com

June 2026

International Textile Machinery Exhibition (ITM)
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https://www.itmexhibition.com/itm2024

Filtech 2024
30 June–2 July 2026
Cologne, Germany
Suzanne Abetz, Filtech Exhibitions Germany;
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info@filtech.de;
http://www.filtech.de

August 2026

Techtextil North America
4–6 August 2026
Raleigh, North Carolina, USA
Kristy Meade, Show Director, Messe Frankfurt Inc;
Tel: +1 (770) 984-8016, x 2428;
Fax: +1 (770) 984-8023;
kristy.meade@usa.messefrankfurt.com;
https://techtextil-north-america.us.messefrankfurt.com

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Rita Li, Messe Frankfurt (HK) Ltd;
Tel: +852 223-9966;
Fax: +852 2598-8771;
rita.li@hongkong.messefrankfurt.com;
https://intertextilehome.hk.messefrankfurt.com/china/en.html

September 2026

CINTE Techtextil China
1–3 September 2026
Shanghai, China
Jason Taylor, Messe Frankfurt (HK) Ltd;
Tel: +852 2230-9296;
Fax: +852 2598-7919;
jason.taylor@hongkong.messefrankfurt.com;
https://cinte-techtextil-china.hk.messefrankfurt.com/shanghai/en.html

Dornbirn Global Fiber Congress
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Dornbirn, Austria
Dornbirn Global Fiber Congress Office;
Tel: +43 (1) 319-2909-41;
Fax: +43 (1) 319-2909-31;
office@dornbirn-gfc.com;
http://www.dornbirn-gfc.com

October 2026

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Shanghai, China
Daphne Poon, ITMA Services;
Tel: +65 9478-9543
daphnepoon@itma.com;
https://www.itmaasia.com

FiltXPO
28–29 October 2026
Miami Beach, Florida, USA
Lori Reynolds, Director of Events, INDA (Association of the Nonwoven Fabrics Industry);
Tel: +1 (919) 459-3716;
Fax: +1 (919) 459-3701;
lori@filtxpo.com;
https://www.filtxpo.com

March 2027

IDEA
23–25 March 2027
Kansas City, Missouri, USA
Misty Ayers, INDA (Association of the Nonwoven Fabrics Industry);
Tel: +1 (919) 459-3712;
Fax: +1 (919) 459-3701;
mayers@inda.org;
https://www.ideashow.org

May 2027

NPE: The Plastics Show
3–7 May 2027
Orlando, Florida, USA
Ashley Stoney, Plastics Industry Association;
Tel: +1 (202) 974-5210;
Fax: +1 (202) 296-7005;
astoney@plasticsindustry.org;
http://www.npe.org

September 2027

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16–22 September 2027
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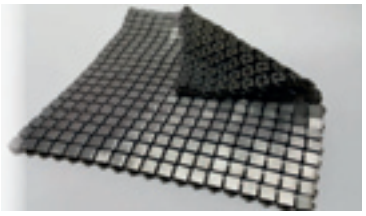
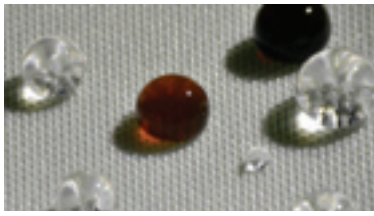

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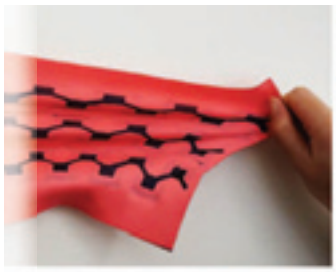

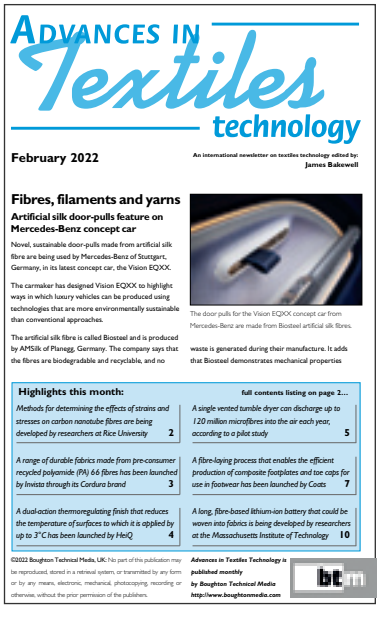
Advances in Textiles technology

February 2022

An international newsletter on textiles technology edited by: James Bakewell

Fibres, filaments and yarns

Artificial silk door-pulls feature on Mercedes-Benz concept car

Novel, sustainable door-pulls made from artificial silk fibre are being used by Mercedes-Benz of Stuttgart, Germany, in its latest concept car, the Vision EQXX.

The carmaker has designed Vision EQXX to highlight ways in which luxury vehicles can be produced using technologies that are more environmentally sustainable than conventional approaches.

The artificial silk fibre is called Biosteel and is produced by AMSilk of Planegg, Germany. The company says that the fibres are biodegradable and recyclable, and no waste is generated during their manufacture. It adds that Biosteel demonstrates mechanical properties

The door pulls for the Vision EQXX concept car from Mercedes-Benz are made from Biosteel artificial silk fibres.

Highlights this month: full contents listing on page 2...

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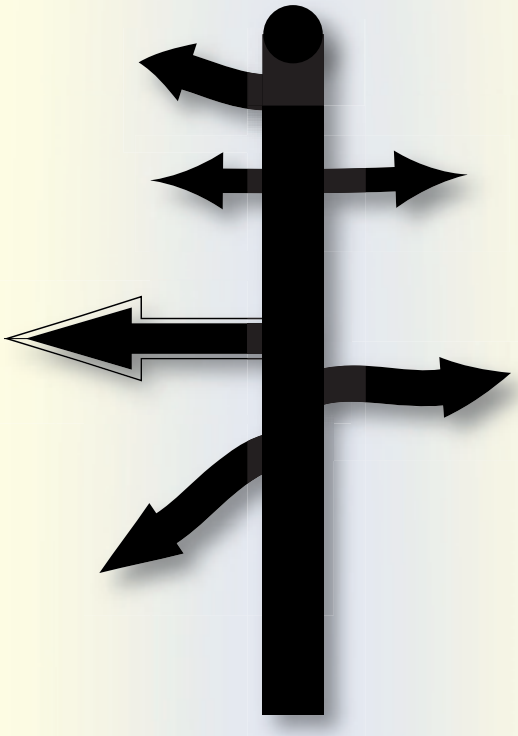

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