

Techtextil 2024

A Glimpse into the
Future of Textiles



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UK fashion brands Asda, Asos, & Boohoo face crackdown for ‘Greenwashing’

■ Mohiemen Tanim

The fashion industry is under increasing scrutiny for its environmental impact, and regulators in the UK are taking action against retailers accused of “greenwashing” – making misleading claims about the sustainability of their products.

Major Retailers Under Investigation

Asda, Asos, and Boohoo, three of the UK’s biggest clothing retailers, have come under fire from the Competition and Markets Authority (CMA) for potentially misleading customers

about the eco-friendliness of their clothing lines. The CMA launched an investigation in 2022 concerned that these companies were using vague sustainability claims to boost their environmental credentials.

This crackdown reflects a growing global trend towards holding businesses accountable for their environmental impact. Consumers, particularly in wealthy nations, are increasingly demanding eco-friendly products, and businesses are scrambling to capitalize on this shift in consumer preferences.

However, the CMA is concerned that some companies may be resorting to deceptive practices to appear more sustainable than they truly are.

The Deal with the CMA

In a first-of-its-kind agreement, Asda, Asos, and Boohoo have voluntarily pledged to the CMA to improve the transparency of their environmental claims. This includes:

- **Clearly defining eco-friendly ranges:** The retailers must establish clear criteria for which products qualify as sustainable within their collections.
- **Avoid misleading imagery:** Vague “natural” imagery, such as green leaves, will no longer be used to create an illusion of eco-friendliness.
- **Providing clear justifications:** Companies must explain why specific fabrics are considered sustainable and back up these claims with evidence.

Unilever Under Investigation

The CMA is not just targeting the fashion sector. Unilever, a consumer goods giant known for brands like Dove and Marmite, is also under investigation for potentially misleading consumers with its “green” claims on certain household products.

Potential Penalties for Greenwashing

To further deter greenwashing, UK lawmakers are considering legislation that would impose significant fines on businesses found to be misleading consumers. These fines could be as high as 10% of a company’s global turnover, making greenwashing a potentially crippling financial penalty.

The CMA has also issued a clear warning to the fashion industry through an open letter, stating that greenwashing will be a target under the proposed digital markets, competition, and consumers bill.

The Rise and Fall of Fast Fashion

The companies facing the CMA’s scrutiny, Asos

and Boohoo, are prominent players in the fast-fashion industry. This business model relies on churning out trendy clothing at low prices, often at the expense of quality and environmental responsibility. Fast fashion is a major contributor to environmental damage due to factors like:

- **Resource Depletion:** Rapid production cycles require vast amounts of resources, such as water and cotton, placing a strain on the environment.
- **Carbon Emissions:** The entire life cycle of fast fashion garments, from production to transportation and disposal, contributes significantly to greenhouse gas emissions.
- **Plastic Waste:** Fast fashion garments are often made from synthetic materials that do not biodegrade, leading to a growing problem of plastic pollution.

Industry Response

The retailers under investigation have expressed their commitment to working with the CMA to improve transparency. Asda emphasized its support for measures that enhance consumer understanding of environmental claims. Similarly, Boohoo’s CEO highlighted the agreement’s potential to provide clarity and their dedication to finding solutions for sustainability challenges within the industry. Asos echoed this sentiment, focusing on developing robust systems to deliver clear and accurate information about the environmental impact of its products and operations.

The Road Ahead

The CMA’s actions and the potential for hefty fines signal a stricter regulatory environment for the fashion industry in the UK. This crackdown is likely to have a ripple effect across the global fashion landscape, pressuring brands to be more transparent and accountable for their environmental impact. As consumer demand for sustainable products continues to rise, businesses will need to adapt their practices to meet these evolving expectations and avoid the consequences of greenwashing.



Techtextil 2024: A Glimpse into the Future of Textiles

■ Md Muddassir Rashid

From May 23rd to 26th, 2024, Frankfurt, Germany will be the epicenter of innovation as Techtextil, the world's leading trade fair for technical textiles and nonwovens, throws its doors open once again. This year's edition promises to be a showcase of cutting-edge technologies and groundbreaking advancements that are poised to revolutionize the textile industry.

Exhibitor Categories and Technologies:

Techtextil boasts a diverse range of exhibitors categorized by their areas of expertise. Here's a glimpse into some of the key categories and the exciting technologies they'll be showcasing:

- **Functional Textiles:** This segment will be brimming with exhibitors like Schoeller Textil (known for their climate-regulating fabrics) and Outlast (famous for phase-change materials). Expect to see advancements in self-cleaning textiles, antimicrobial fabrics, and those with enhanced breathability and thermal regulation.
- **Smart Textiles:** The future is smart, and textiles are no exception. Companies like Interactive Wear (specializing in interactive textiles) and AiQ Smart Clothing (pioneers in bio-sensing garments) will be at the forefront. Look out for advancements in wearable technology that integrates sensors, actuators, and connectivity for health monitoring, performance enhancement, and even personalized comfort.
- **Medical Textiles:** This vital sector will see participation from companies like Lohmann & Rauscher (renowned for medical dressings)

and Hartmann Group (leaders in wound care solutions). The focus will be on innovative wound dressings, biocompatible materials for implants, and textiles for regenerative medicine.

- **Protective Textiles:** Safety takes center stage with exhibitors like Teijin Aramid (known for their flame-retardant fibers) and Dyneema (pioneers in high-strength polyethylene fibers). Expect advancements in fire-resistant clothing, bulletproof vests, and personal protective equipment (PPE) with enhanced comfort and functionality.
- **Sustainable Textiles:** As environmental consciousness grows, sustainable solutions take precedence. Lenzing (leaders in eco-friendly fibers like Tencel) and Patagonia (champions of responsible manufacturing) will be key players. Look out for advancements in recycled materials, organic fibers, and closed-loop production processes that minimize environmental impact.
- **Sport Textiles:** Pushing the boundaries of performance will be companies like Nike (known for their innovative athletic wear) and Adidas (leaders in performance apparel). Expect to see advancements in moisture-



Figure: Medtech at Techtexsil, ©Jean-Luc Valentin / Messe Frankfurt

wicking fabrics, thermoregulation technologies, and garments that optimize movement and recovery.

- **Home Textiles:** Innovation extends to our living spaces. Trevira (famous for their polyester fibers) and Sandler (leaders in nonwoven fabrics) will be key exhibitors. Look out for advancements in flame-retardant home textiles, self-cleaning upholstery materials, and smart fabrics that enhance comfort and air quality.

What's Happening at Techtexsil 2024?

Beyond the exhibitor booths, Techtexsil offers a plethora of engaging events. Here are some highlights:

- **Techtexsil Forum:** This platform brings together industry leaders, researchers, and innovators for insightful discussions on the future of technical textiles. Expect talks on topics like digitalization, sustainability, and the role of textiles in emerging technologies.
- **Techtexsil Innovation Awards:** Recognizing excellence, these awards celebrate the most groundbreaking developments in the textile industry. Witnessing who takes home the honors will be a testament to the industry's cutting edge.
- **Techtexsil Student Design Competition:** Encouraging the next generation, this competition showcases the innovative ideas of



©Jean-Luc Valentin / Messe Frankfurt

students. Witnessing their creations will offer a glimpse into the future of textiles.

- **Special Shows:** Dedicated areas will spotlight specific textile applications, such as Techtextil Medical with a focus on medical textiles or Techtextil Digital with a focus on digital printing and finishing technologies.

Technologies Grabbing Attention:

Several key technologies are poised to capture the spotlight at Techtextil 2024:

- **Biomimetic Textiles:** Drawing inspiration from nature, these textiles mimic biological structures to offer superior functionality. Imagine self-cleaning fabrics inspired by lotus leaves or temperature-regulating materials inspired by animal fur.
- **Nanotechnology:** The integration of nanomaterials into textiles offers exciting possibilities. Imagine fabrics with enhanced strength, conductivity, or UV protection, all thanks to the power of nanotechnology.
- **3D Printing for Textiles:** Revolutionizing production, 3D printing allows for the creation of complex textile structures with customized properties.
- **Circular Economy in Textiles:** With sustainability paramount, the focus will be on closed-loop systems for textile production. Expect advancements in recycling technologies, bio-based materials, and biodegradable textiles that minimize environmental impact.

The Future is Woven with Innovation: Spotlight on Emerging Applications

Here's a glimpse into some exciting possibilities that may grab attention at the event:

- **Textiles for a Connected World:** Imagine buildings that regulate temperature with smart fabrics or roads that harvest energy using piezoelectric textiles. Techtextil will showcase how textiles are being integrated into the

Internet of Things (IoT) to create a more responsive and interconnected environment.

- **Textiles for a Healthier You:** Wearable health monitors woven into clothing? Bio-responsive textiles that adapt to your body temperature? Techtextil will highlight advancements in healthcare textiles that can monitor vital signs, promote wound healing, and even deliver targeted drug therapy.
- **Textiles for a Sustainable Future:** From bio-based fibers to closed-loop recycling systems, Techtextil will be a platform for showcasing sustainable solutions. Look out for advancements in organic cotton production, biodegradable textiles, and innovative dyeing processes that minimize environmental impact.
- **Textiles for Enhanced Performance:** Athletes seeking that extra edge will be intrigued by advancements in performance textiles. Imagine garments that optimize muscle movement, regulate body temperature during intense activity, and even provide real-time feedback on exertion levels.
- **Textiles for Space Exploration:** The future of space exploration demands innovative materials. Techtextil might showcase advancements in radiation-shielding textiles, self-repairing fabrics for spacecraft, and even wearable technology for monitoring astronauts' health in harsh extraterrestrial environments.



Figure: Fibres and Yarns, ©Jean-Luc Valentin / Messe Frankfurt

Strategies to achieve breathability in waterproof fabrics

■ Homayra Anjumi Hoque

Waterproof fabrics are essential for many outdoor activities, such as hiking, skiing, cycling, and more. They protect the wearer from rain, snow, wind, and cold, while also allowing the body to regulate its temperature and moisture. Most of the waterproof fabrics aren't equally breathable, some may cause discomfort, overheating, or dampness. Nowadays, fabric manufacturers are diving into exploring new techniques and methods of developing fabric waterproof and breathable at the same time.

Clothing and accessories have evolved significantly in today's health and fitness-conscious world. People are eager to devote their money to attain a highly efficient, well-toned physique that can work at high heart rates without endangering organs such as the lungs and heart.

This trend can be seen on social media platforms, where there is a rising interest in fitness-related material and education among all age groups. Beyond fitness, breathable waterproof materials have a wide range of uses in professional gear, including clean rooms, military, firefighting, and agricultural wear. In the medical area, this technology may be used to create wearables like surgical gowns, dressings, and hygiene items.

How do Breathability and waterproofness work on a fabric at a time?

There are three techniques for making a breathable and waterproof fabric:

- **High-density woven textiles**
- **Coated fabrics and**
- **Laminated fabrics**

The three-layered laminated fabric consists of a layer of liner fabric in direct contact with the

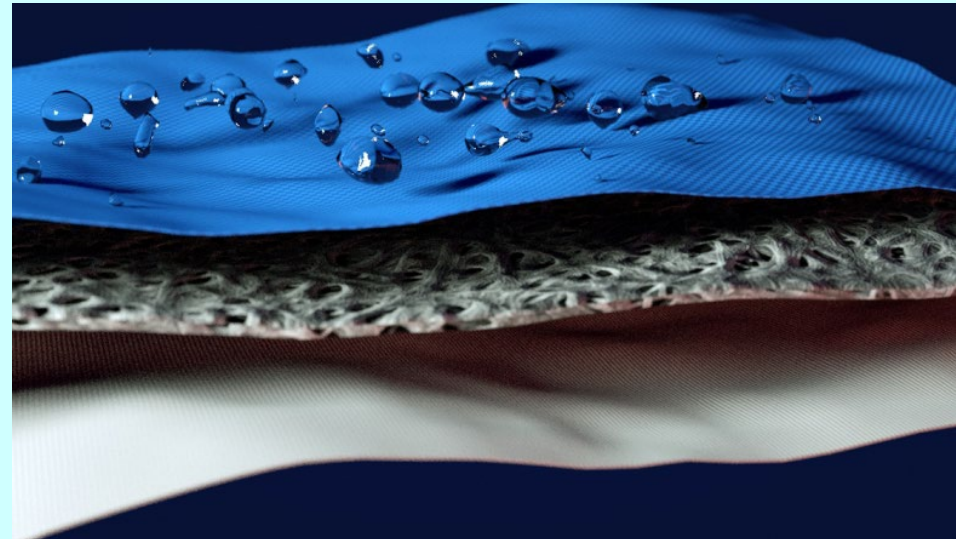


Figure: Breathable and waterproof fabric Source: eVent fabrics

porous/fibrous membrane, which serves as a barrier for bigger molecules (vapors) while allowing smaller molecules (air) to pass through.

The liner fabric acts as an internal garment, allowing tiny, aerated vapors to reach the membrane interface during sweating. The membrane's porous structure allows particles of varying sizes to permeate. The third layer of waterproof cloth keeps external water vapors out while enabling interior vapors to infiltrate and depart.

Material hydrophilicity/hydrophobicity, permeability, porosity, mechanical strength, temperature resistance, and, finally, the attachment/lamination of each layer to the next are all important criteria to consider while designing these textiles.

Developing nano-fibrous membranes by electrospinning process:

When conventional membrane materials such as polytetrafluoroethylene (PTFE) and thermoplastic polyurethane (TPU) are layered, they have several disadvantages over one another. These include PTFE's expense and recycling problems, as well as TPU's lack of porosity, which results in poor water permeability and discomfort. The negative

link between defensive capabilities and comfort makes it difficult to achieve both simultaneously.

To overcome the limitations of existing approaches, electrospinning has presented a revolutionary way for producing nanofibrous and porous membranes with higher efficiency, tailored nanostructures, and lower weight. The procedure is simple: it entails applying high voltage from a charged spinneret to a polymeric solution, which deposits the polymer directly into a substrate, such as liner fabric.

With modern electrospinning technologies, large-scale continuous manufacturing of membranes laminated with textiles is possible. Recent research has concentrated on improving membrane features, such as vapor transfer and hydrostatic pressure (while avoiding ecologically toxic fluorine-based compounds) and increasing the producibility of very hydrophobic resistant membranes.

This entails controlling processing parameters (voltage, deposition distance, injection flow rate, spinneret diameter), environmental variables (relative humidity, temperature), and solution properties (viscosity, conductivity, surface tension). This allows for a mix of breathability and waterproofing qualities.

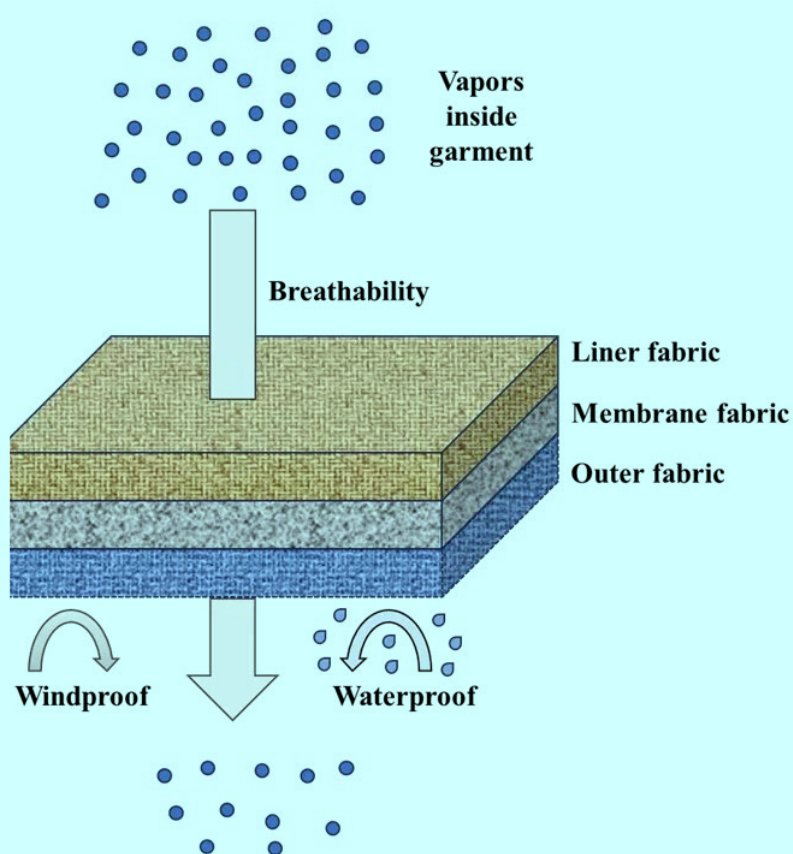
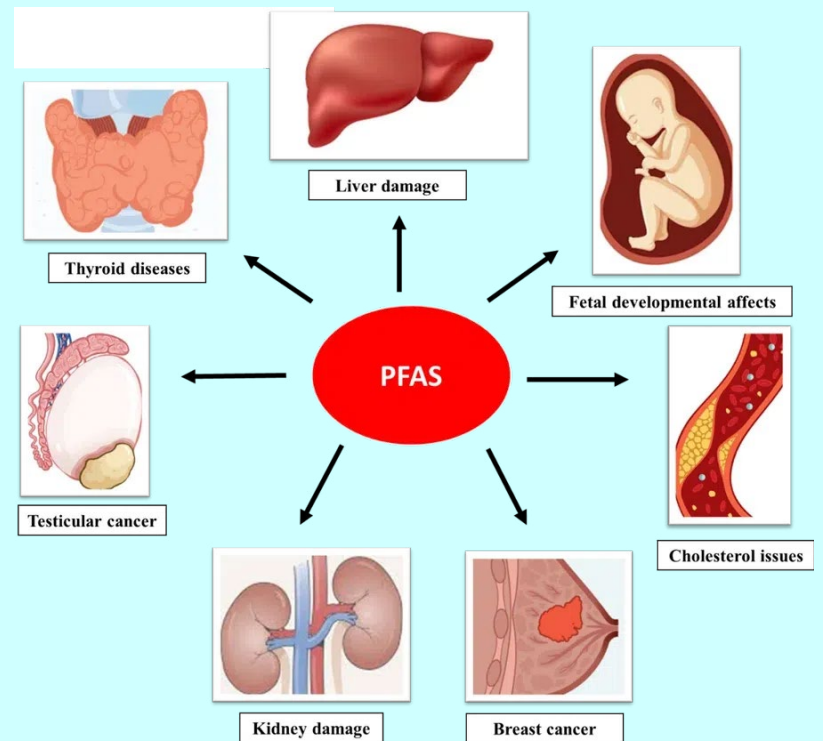


Figure: Scheme of a three-layered, breathable, waterproof fabric. Source: Inovenco



Features of the fabric integrating Breathability:

Breathability in textiles refers to the ability of water vapors to efficiently infiltrate through diffusion, allowing cooling through evaporation.

- Enhanced breathability allows more sweat from the skin to reach the fabric’s surface, minimizing moisture accumulation within and guaranteeing user comfort.
- The moisture vapor transmission rate, which represents the rate at which vapors may penetrate through a square meter of fabric in 24 hours and is measured in grams per square meter per day, can be used to assess breathability.

Features of the fabric integrating Waterproofness:

Waterproofness is determined by hydrostatic pressure, which is measured in millimeters. The waterproof ratings also define the fabric’s use. For example, materials with a rating of up to 10000 mm can endure mild rain, moderate snow, and pressure. Fabrics with values greater than 20,000 mm can withstand heavy rain, snow, and high pressure.

Materials that can be mostly used:

Each of these polymers possesses unique capabilities that contribute to fabric formation. They are either combined among themselves or with other agents like carbon nanotubes (CNTs), silicon dioxide (SiO₂), and functional fluorine.

C&A Partners with Canopy to Protect Ancient and Endangered Forests

■ Amzad Hossain Monir

Fashion Retailer Commits to Sustainable Sourcing and Packaging Solutions

C&A, a global clothing retailer, announced a significant step towards environmental sustainability by joining Canopy's Pack4Good initiative. This partnership signifies C&A's commitment to protecting ancient and endangered forests by eliminating their use in its paper, packaging, and regenerated cellulose fibers (rayon, viscose, lyocell, modal) by 2025.

C&A's new policy outlines a comprehensive approach to achieving this goal. Here are some key highlights:

- **Prioritizing Recycled and Certified Materials:** C&A will exclusively use recycled and Forest Stewardship Council (FSC) certified pulp and paper. FSC certification ensures responsible forest management practices.
- **Collaboration for Innovation:** The company will work closely with Canopy and other innovative businesses to develop next-generation solutions and alternative fibers with a lower environmental footprint.



“Packaging is crucial to our business. We have been proud partner of Canopy’s environmental movement and by joining Pack4Good we are taking a stand against sourcing wood-based materials from ancient and endangered forests”

Minette Bellingan,
Chief Operating Officer at C&A.



- **Focus on Reduction and Reuse:** C&A recognizes the importance of minimizing packaging usage. They plan to develop a reduction and reuse strategy for paper and packaging products, exploring options like reusable shipping boxes and digital communication channels.
- **Responsible Fabric Choices:** C&A will ensure its regenerated cellulose fibers do not originate from ancient and endangered forests. They require suppliers to undergo independent audits and source from responsible producers.
- **Transparency and Progress Tracking:** C&A is committed to transparent communication. They will set clear targets and timelines for achieving their sustainability goals and report publicly on their progress.

Canopy's Pack4Good Initiative

Canopy is a non-profit environmental organization dedicated to protecting forests, especially ancient and endangered ones. Their Pack4Good initiative specifically targets the fashion industry's paper and packaging practices. By partnering with Canopy, C&A gains access to valuable resources and expertise to achieve its sustainability goals.

Dell'Orco & Villani showcases recycling tech at Techtextil 2024

■ SAS ENTERPRISE



Dell'Orco & Villani (D&V), a renowned Italian manufacturer of textile recycling equipment, gears up to showcase their innovative solutions at Techtextil 2024. With over 60 years of experience, D&V remains at the forefront of developing technology for recycling knitted, woven, and nonwoven textiles. Their commitment to sustainability and efficient recycling processes aligns perfectly with the core themes of Techtextil, making them a key player to watch.

Product Highlights for Techtextil 2024

D&V's exhibition at Techtextil 2024 might feature some of their pioneering machinery, including:

- **Twin Carding Opener TCO:** This state-of-the-art machine incorporates two synchronized cylinders for superior nonwoven post-production waste, fiber, and woven textile opening.
- **Fiber Opening and Blending Lines:** D&V offers customized solutions for precise fiber

blending and metering. Their lines cater to Airlay Thermobonding, Airlay Resin Bonding, Carding, and Needlepunching processes.

- **Textile Recycling Lines:** The recently introduced TITAN tearing machine designed for various textile waste and secondhand clothes recycling is a potential showstopper. Its compact design, user-friendly features, and efficient operation grab attention to visitors.
- **Baling Presses:** D&V offers single, double box, and horizontal baling presses for textile cut materials and fibers, with capacities ranging from 400 to 2000 kg/h.
- **Cutting Machines:** Guillotine, rotary, and circular cutting machines designed for high-production cutting of clean post-production materials, secondhand clothing, and fibers.

Dell'Orco & Villani's innovative recycling solutions can empower manufacturers to embrace sustainable practices, reduce waste, and contribute to a more circular textile economy.

Thermore® introduces stretch insulation made of 50% recycled polyester

Arif-Uz -Zaman



Figure: Thermore group has announced their newly recycled fiber, FREEDOM Source: Thermore

In a world where the quest for sustainability is becoming increasingly crucial, An Italian thermal insulation manufacturer, Thermore Group takes a bold leap forward with its latest innovation: Thermore® Freedom Stretch Insulation. This groundbreaking material not only champions the cause of eco-friendly practices but also redefines the boundaries of performance wear. With its exceptional stretch and recovery properties, Freedom Stretch Insulation promises to deliver unparalleled comfort and freedom of movement, setting a new benchmark for sustainable performance in the textile industry.

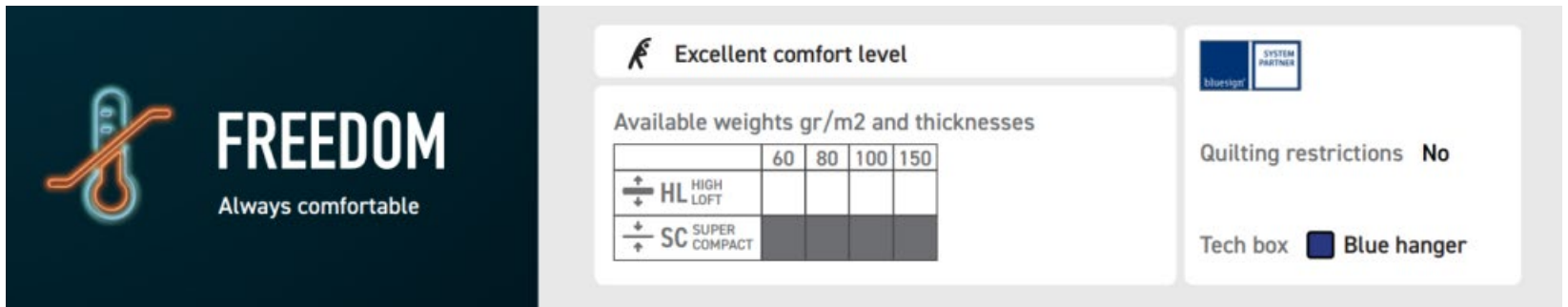
The Thermore group announced the debut of the most dynamic stretch insulation in its five decades of innovation: Freedom. Made from 50-percent post-consumer recycled polyester, this unique and compelling insulation offers ground-breaking stretch while providing warmth across a multitude of uses including alpine sports, running, golf,

commuter, fishing and hunting, cycling, and a host of other active pursuits.

It says that dynamometer testing has revealed that the insulation, which is available in four degrees of warmth ranging from 60-150g per square meter, has flexibility capable of recovering up to 100% of its pre-stretch size. Thermore also says that their new Freedom stretch insulating fabric provides greater comfort and utility than was previously possible in the stretch category. The Freedom insulation is GRS-approved, machine washable, and dry cleanable. Thermore further claims that its great resistance to fiber migration makes it design-friendly for product makers.

Chronological development of Thermore

Thermore began using recycled fibers in the 1980s and claims to be the first firm to launch recycled insulation. It is currently concentrating



on sustainable innovation using post-consumer waste, such as PET bottles, and specializes in the research, development, manufacture, and marketing of high-quality thermal insulation for performance garments.

Thermore debuted their ocean-bound raw fiber in May 2023 to help minimize plastic waste. Ecodown Fibers Ocean is constructed completely of ocean-bound raw materials, notably PET bottles. It is environmentally beneficial and helps to reduce plastic trash in the water.

Thermore also stated that it has boosted the recycled fiber percentage of its best-selling product, Thermore Classic. With 75% of the content now complete, Thermore said it will continue to provide designers with an ultra-versatile thermal insulation solution that corresponds with their sustainability aims.

At the time, Thermore stated that its long-standing commitment to environmental sustainability had led the company to adopt major initiatives to mitigate the impact of its goods on the earth.

What are the specials in FREEDOM?

1. Anti-Fiber migration: The idea that the product should maintain its structural stability throughout the garment is one of Thermore®'s basic beliefs. In essence, fiber migration happens when the insulation's polyester fibers can separate from the structure and pass through an item of clothing's shell or lining. This can quickly cover the mid-layer of garments with a variety of ugly fibers. Freedom fabric's protection is accomplished without the need for a scrim, which is more expensive, harmful to the hand, and only a temporary fix.

2. Heat retention: Thermore's R&D department

consistently prioritizes durable performance. It has been demonstrated that after washing, other branded insulation can lose up to 30% of its loft, which corresponds to a comparable reduction in heat retention. Furthermore, Thermore feels that consumers should be allowed to quilt their coats however they choose and not be forced to use a lot of quilting to stabilize the insulation. Test results from independent laboratories demonstrate that quilting reduces insulation's warmth by over 30%. Freedom holds its original structure over time and doesn't need to be quilted. As a result, there are no cold spots or clumping problems across the entire garment lifetime.

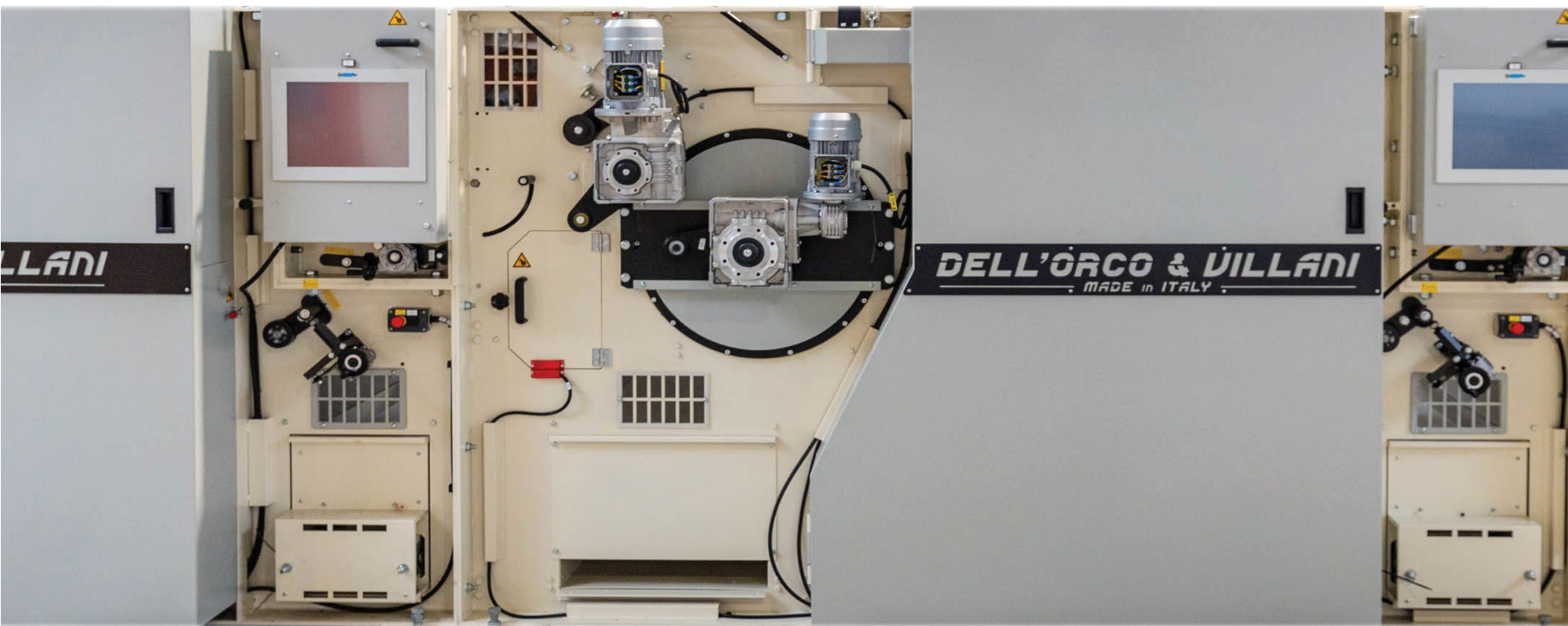
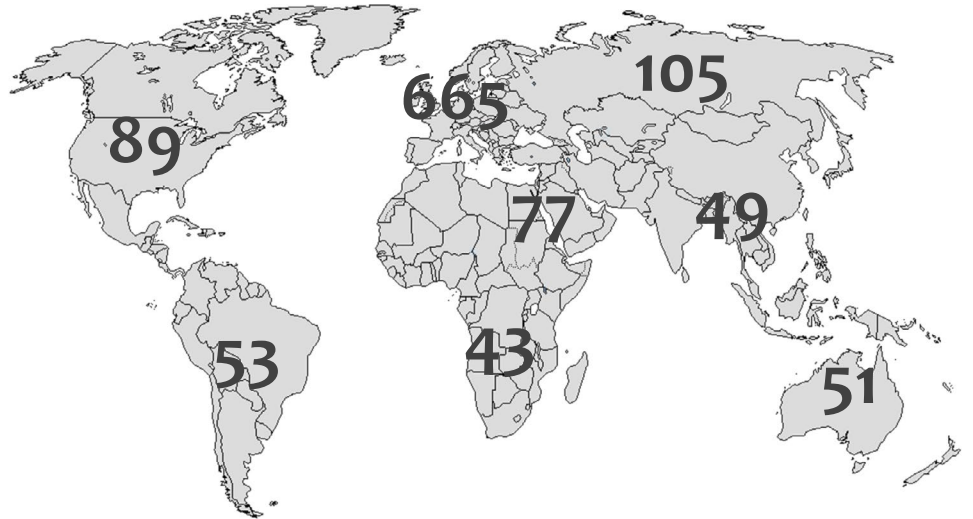
3. Fiber Composition: The construction is made of 100% polyester which is extracted from PET plastic bottles. There are 50% PCR too.

4. GRS Certification: The desired effect of GRS (Global Recycled Standard) is to provide brands with a tool for more accurate labeling, to encourage innovation in the use of reclaimed materials, to establish more transparency in the supply chain, and to provide better information to consumers. Freedom got GRS certification ensured a greener supply chain for businesses and improved things like Traceability, Environmental principles, etc.

Steps towards Sustainability

The new Freedom insulation adds a higher level of comfort and functionality than what was previously attainable in the stretch category. It reaffirms Thermore's place in the textile industry as a true innovator that is deeply rooted in performance and sustainability. This represents another step forward in Thermore's ongoing dedication to commit to a sustainable product line.

3500+
MACHINES sold



Complete lines for textile & garment waste recycling (waste to fiber) from Italy



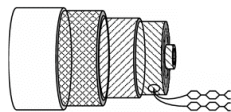
"Delta Start" System confirms
 Less Power Consumption



Highest Level of
 Fire Protection



Big Drum Size for
 High Level Production



Special Technology for
 Homogeneous Fiber



Auto Blending System for
 Uniform Fiber Length



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Texhibition, Istanbul 2024: One roof assembling trends with innovation

■ Hodayra Anjumi Hoque

Bringing global buyers together with the industry with the cooperation of Istanbul Textile and Apparel Exporter Associations (ITHİB) by İTKİB FAIRS INC, the Fifth edition of Exhibition Istanbul Fabric, Yarn and Textile Accessories Fair kicked off at the Istanbul Expo center on 6 March to 8 March 2024. This year's event, with its spotlight on denim and a strategic move upmarket, reflects the evolving landscape of fashion where tradition meets innovation. Amidst the bustling halls, industry leaders and creatives gather, signaling a new era for Turkish textiles, one that honors its rich heritage while boldly striding into a future defined by luxury and sustainability.

Before the Covid pandemic, the French trade fair *Première*



Figure: Texhibition Istanbul showcases innovation with sustainability Source: FashionUnited

Vision was held in Istanbul; however, since then, Turkish players have taken over this task, and the fair is organized by the Istanbul Textile and Apparel Exporters Association (Ithib), a member of the Turkish Fashion and Textile Association İtkib. The stakes are high for the country, which, unlike other producing countries such as Tunisia and Morocco, has integrated production capacities that allow it to carry out all (or nearly all) production phases in the textile and clothing industries.

Texhibition Istanbul at a glance:

- Over 35,000 square meters in five halls, around 560 exhibitors will be presenting a wide range of products such as woven goods, knitwear, denim, accessories, imitation leather
- Over 30,000 trade visitors are expected from more than 100 countries, including the European Union, Great Britain, the USA, North Africa and the Middle East
- New: Yarn Hall with 41 exhibitors and BlueBlackDenim Hall with 21 exhibitors
- Inspiration and creation



Figure: Texhibition Istanbul, Source: Texhibition Istanbul

at Exhibition: Digital Art Exhibition, Texhibition Trends by Idil Tarzi & Creative Team, Innovation Hub

Due to popular demand, the fair has been expanded to five halls, including the new Yarn Hall (Hall 8) with exhibitors such as Sasa, Aksa, Kerafiber, Kortex, Tepar, Ensar, Kaplanlar and Iskur and the BlueBlack Denim Hall (Hall 7), which showcases the latest denim trends and presents a wide range from iconic blue shades to black denims with exhibitors such as isko, Çalık Bossa, Kipas and iskur. BlueBlack Denim is designed by the well-known designer Idil Tarzi in cooperation with the creative directors Gönül Altunisik and Selvi Yigci. Visitors can expect an impressive, multi-faceted range.

Eeden develops a new process to recover cotton & polyester from its blend

■ Homayra Anjumi Hoque

Every year, millions of tonnes of textile waste are generated, only a fraction of the used textiles are recycled into new fibers, and even less are made from recycled materials. According to EcoWatch, roughly 39,000 tons of unwanted clothing are delivered to the Atacama Desert each year, where they cover the dunes and pose considerable environmental issues. Less than 1% of worn textiles globally are recycled into new textile fibers.

This linear system of production and consumption is unsustainable and harmful for the environment and human health. But, a new technology is emerging that could change the game for textile recycling. A German startup



Figure: Eeden's new technology for recycling cotton-PET blend Source: Sourcing journal

called 'Eeden' has developed a novel chemical process that can recover both cotton and polyester from cotton-PET blends, which are widely used in modern clothing. The recovered materials can then be spun into new, high-quality fibers that can be used for various applications.

The story behind the innovation

To allow fashion firms to produce circular clothes of the same quality as virgin garments, Eeden is doing something thinking about textiles land fillings, and wastages. Reiner Mantsch, co-founder and technological head, came up with the concept to create Eeden while studying textile technology at the Niederrhein University of Applied Sciences in Krefeld, Germany. However, what began as a student initiative at the Hochschule Niederrhein, which is well-known for its textile department, has received substantial notice only four years later.

How do they do the engineering process?

Unlike other chemical recyclers, who can only

“

We see Eeden's technology as a great opportunity for the industry and major fashion brands to become independent of scarce natural resources while solving the global used textile problem and already meeting future EU directives.

Already today we see great potential beyond the demand of the fashion industry.

– Andrea Muth,
investment manager at Born2Grow

“

There's the opportunity [for plug-and-play] so we're not engineering totally new machinery; we don't want to create new process technology, we want to use technology so that some of the strategically fitting companies—like the fiber, chemical or paper industries—are able to use our technology in a licensing model.

Noting the need to “prove unit economics” and reach industrial scale

– Andrea Muth, investment manager at Born2Grow

salvage one fiber from blended fabrics like cotton-PET mashups, Eeden has discovered a means to efficiently separate the cotton from the PET, allowing both to be spun into like-new fibers. Eeden is not only establishing a solution for more than 70% of the EU's worn textiles, but it also provides an opportunity for fashion companies to create recycled clothing that meets quality criteria.

Eeden prioritizes green chemistry. It recovers the biopolymer cellulose from cotton-rich textile waste and converts polyester into fundamental building blocks. Industrial partners then convert the materials into lyocell, viscose, and polyester. From there, businesses may make high-quality jeans, shirts, and other clothing out of these textiles.

How do they incentivize a circular economy?

The EU Strategy for Sustainable and Circular Textiles seeks to develop a greener, more competitive sector that is more resilient to global shocks. The Commission's 2030 goal for textiles is that all textile products placed on the EU market are durable, repairable, and recyclable, manufactured to a large extent of recycled fibers, free of harmful compounds, and produced by social rights and the environment.

Eeden is currently developing its demonstration model with industrial cleaning firms. Large-scale commodities, such as bed sheets and tablecloths, are rented or leased to hotels and hospitals.

Global achievements of the startup:

In October 2023, Eeden won the Sustainable

Impact Award from WirtschaftsWoche, a notable German business magazine. After one month, in November 2023, the startup received a 500,000-euro (\$542,000) research budget from the German government.

By the end of 2024, Eeden intends to close a Series A, create a pilot plant, launch a prototype textile, and work with textile collectors, fiber spinners, and fashion brands to acquire industry insights.



Figure: Eeden's products are designed to serve as drop-in solutions for today's textile industry manufacturing processes Source: Yahoo Life

EU parliament establishes policies to fight food & textile waste

■ Shafiqun Nahar Elma



Figure: Thermore group has announced their newly recycled fiber, FREEDOM Source: Thermore

The European Parliament has taken decisive action to confront the significant challenges posed by textile and food waste within the European Union (EU). Recent data from the European Environment Agency (EEA) reveals that the EU generates a staggering 12.6 million tonnes of textile waste annually. Most of the amount of this waste ends up being incinerated, exported, or deposited in landfills, causing environmental issues. According to data, clothing and footwear alone contribute to 5.2 million tonnes of this waste, which is equal to 12 kg per person annually, and only 22% of those are collected for reuse or recycling. While significant advancement has been made, challenges persist. The EU currently recycles only 1% of all textiles globally, underscoring the need for ongoing innovation in waste management.

On March 13th, 2024, the EU Parliament approved its recommendations aimed at enhancing waste prevention and reduction in the

European Union (EU) concerning textiles and food. By prioritizing circular economy principles and sustainable practices, the EU Parliament lays the groundwork for a greener, more resilient future where waste is minimized, resources conserved, and environmental impact reduced. MEPs overwhelmingly endorsed their preliminary position on the proposed Waste Framework revision, with 514 votes in favor, 20 against, and 91 abstentions

Parliament mandates the evaluation of distinct objectives for the primary production of food waste by 2025, aligning with Sustainable Development Goal 12.3, which aims to have food loss and waste by 2030—aiming for a 20% reduction in food processing and manufacturing and a 40% reduction in retail, domestic and restaurant. These targets represent a significant increase from the initial proposals, highlighting Parliament's dedication to combating food waste across the supply chain. Members of the

European Parliament have reached a consensus to prolong the producer responsibility (EPR) schemes. This means that producers selling textiles in the EU will be required to bear the expenses for collecting, sorting, and recycling them individually. Within 18 months of the directive coming into effect, member states must establish these schemes, which is a shorter timeline compared to the 30 months initially suggested by the Commission. The updated regulations will encompass various products like clothing, ac textile accessories, blankets, bed linen, curtains, hats, footwear, mattresses, and carpets, as well as items containing textile-related materials such as leather, composition leather, rubber, or plastic.

Proposed revisions to the Directive permit producers to sell products in the EU to cover the costs of collection, sorting, and recycling of their products.

MEPs acknowledge the effects of sending used textiles to underdeveloped countries and emphasize the importance of a comprehensive framework to ensure global accountability. This involves measures to ensure that financial assistance reaches countries affected by textile overconsumption in the EU.

Rapporteur Anna Zalewska (ECR, PL) has highlighted the efforts made by Parliament to address the issue of food waste. These efforts include initiatives like promoting the consumption of “ugly” fruits and vegetables, monitoring unfair market practices, providing clear date labelling, and encouraging the donation of unsold but consumable food. Additionally, the focus is not only on household textiles but also on non-household products such as carpets and mattresses, as well as sales through online platforms. The new Parliament, which will be in session after the European elections from 6-9 June, will continue to work on this file.

European Parliament’s adoption of proposals to combat textile and food waste signifies a meaningful stride towards a more sustainable future for the EU. By endorsing measures such as extending producer responsibility schemes for textiles and setting ambitious targets to reduce food waste, MEPs demonstrate a steadfast commitment to tackling environmental challenges. As the directive progresses, it is imperative to sustain momentum and continue working towards implementing circular economy principles and sustainable practices where waste is minimized, resources are preserved, and environmental sustainability is prioritized.





Figure: Texhibition Istanbul March 2024 Credits: F. Julienne

Balena & Variable Seams collaborate on 3D-printed POC garment with FlexTex3D

■ Rahbar Hossain

The fashion industry, while captivating us with its trends and creativity, grapples with a dark secret: environmental devastation. From overproduction leading to mountains of textile waste to reliance on fossil fuel-based materials like polyester, the industry leaves a significant ecological footprint.

A Crisis of Abundance: Fashion's Unsustainable Reality

The fashion industry faces a crisis of abundance. A staggering 40% of garments go unsold annually, translating to a mind-boggling 60 billion pieces ending up in landfills. This overproduction stems from fast fashion trends and a lack of transparency in supply chains. Additionally, the industry heavily relies on synthetic materials like polyester and nylon derived from fossil fuels. These materials contribute significantly

to greenhouse gas emissions and microplastic pollution in our oceans.

The Challenge: Rethinking Production and Materials

Change is imperative. A recent GFA survey reveals that 78% of fashion brands acknowledge the need to reduce overproduction. However, achieving this requires a two-pronged approach. First, brands need to move towards on-demand production models, eliminating the need for large pre-produced inventories. Second, they require a shift towards circular materials – those designed for a closed-loop system where they can be reused, recycled, or composted at the end of their lifespan.

3D printing offers a potential solution for on-demand production. It allows for the creation of garments directly from a digital design,

eliminating waste generated by traditional cutting and sewing methods. But a crucial hurdle lies in finding the right materials. Existing filaments used in 3D printing often lack the flexibility, durability, and comfort required for apparel.

The Solution: FlexTex3D – A Game-Changer for Sustainable Fashion

Balena's revolutionary FlexTex3D technology presents a solution that disrupts the fashion landscape. This technology utilizes BioCir®flex3D, a biobased, compostable, and recyclable thermoplastic material. This groundbreaking innovation empowers the 3D printing of fabrics and garments that are not only exceptionally flexible and durable but also comfortable to wear.

The magic lies in BioCir®flex3D's biobased and biodegradable properties. It offers a game-changing solution for a fully circular additive textile manufacturing process. Unlike traditional materials that leave behind waste, FlexTex3D promotes a "design out waste" approach where materials are regenerative.

FlexTex3D presents a sustainable alternative to harmful conventional plastics like polyester, nylon, polypropylene, PVC, and PET commonly used in fashion. By introducing FlexTex3D to the market, Balena aims to "de-fossilize" textile fashion and minimize environmental impact through complete end-of-life solutions, such as composting worn-out garments.

A Collaboration for Change: Balena and Variable Seams

The power of collaboration fuels innovation. At the heart of the Balena and Variable Seams partnership lies a shared commitment to driving forward the principles of circular fashion. Brigitte Kock, founder of Variable Seams, is a trailblazer in modular 3D fashion design, fueled by a desire to challenge the industry's unsustainable practices. However, the scarcity of flexible, eco-friendly filaments hindered her vision.

Together, they offer a compelling vision of a future with compostable, on-demand fashion textiles, setting a new standard for sustainable garment production.

Beyond Innovation: The Balena Guiding Principles

Balena's commitment to sustainability extends beyond just creating innovative materials. They outline a set of guiding principles for developing truly circular materials:

Biobased Content 50%+: Materials should have a high percentage of biobased content, meaning they are derived from renewable resources.

Clear End-of-Life: Materials must have a clear end-of-life solution, either through composting or recycling.

Zero-waste Solution: This involves controlled biodegradability with a take-back program for used garments, ensuring proper disposal and minimizing waste.

Reduced Carbon Footprint: The production process of the material should have a minimal impact on the environment.



EU's #ReFashionNow campaign: New strategy for promoting textile circularity

■ Faujia Mushtari



Figure: Eeden's new technology for recycling cotton-PET blend Source: Sourcing journal

In a monumental stride towards sustainability, the European Union (EU) has unveiled an extensive strategy poised to reshape the textile industry. With ambitions to render the sector greener, more competitive, and significantly less environmentally detrimental, the EU's Strategy for Sustainable and Circular Textiles represents a pivotal moment in the global drive towards a more sustainable future.

The vision for 2030 articulated within the strategy transcends mere aspirations, delving deep into the heart of the textiles industry's environmental impact. At its core lies a multifaceted approach to mitigating waste and pollution while conserving precious resources such as energy and water.

Embracing the concept of sustainable fashion, the strategy endeavors to create a harmonious ecosystem where producers, consumers, and the planet thrive in unison.

Key to this transformation is the reimagining of textile design. Understanding that a staggering 80% of a product's environmental footprint is determined during its design phase, the EU is set to introduce stringent design requirements. These mandates will ensure textiles are built to withstand the test of time, facilitate ease of repair, and facilitate efficient recycling processes. Through these measures, the EU aims to foster a culture of longevity and durability in textile consumption.

Yet, the strategy extends far beyond the realm of design. Transparency and consumer empowerment emerge as pivotal themes, with initiatives such as clearer labeling and the introduction of a Digital Product Passport poised to revolutionize the way consumers engage with textiles. By providing comprehensive information on environmental factors, consumers are empowered to make informed decisions that align with their values. The challenge of overproduction and The scourge of microplastics further underscores the urgency of action.

But the EU's commitment to sustainability transcends borders. Recognizing the interconnected nature of global supply chains, the EU is pioneering efforts to promote human rights and environmental sustainability on a global scale. Through new rules on Corporate Sustainability Due Diligence, companies are held accountable for their impact, fostering a culture of responsibility and integrity.

The urgency of the EU's action is palpable. The textiles industry, ranked among the least sustainable globally, stands at a crossroads. With production doubling between 2000 and 2015 and



consumption projected to double by 2030, the imperative for change has never been more pressing. By championing innovation, transparency, and responsibility, the EU's strategy serves as a beacon of hope in an increasingly fragile world.

EU's Strategy for Sustainable and Circular Textiles epitomizes a holistic approach to sustainability. By addressing the entirety of the textile lifecycle, from production to consumption to disposal, the EU charts a course towards a future where textiles are not merely commodities but symbols of environmental stewardship and social responsibility. As the world looks to the EU for leadership in sustainability, the textiles industry stands on the brink of a transformative revolution, one that promises to redefine its very essence for generations to come.



Figure: #ReFashionNow Ambassadors from across Europe

H&M & Vargas partners for mass production of recycled polyester

■ US Shampa

The Fashion industry faces a pressing global challenge with less than 1% of the global textile fiber market originating from recycled textiles. The industry accounts for 7-10% of global CO₂e emissions, with polyester emerging as the largest emitter and fastest-growing fiber.

For that instance, Syre, a venture initiated by global investor Vargas Holding and Swedish retailer H&M



Figure: recycled polyester

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“The new venture Syre is an important next step on H&M Group’s journey to integrate circularity across our business. With this solution to rapidly scale textile-to-textile recycling, we want to continue to drive and inspire more industry players to join us in closing the loop and accelerating the shift towards a more sustainable future.”

Daniel Erv r, CEO of H&M Group

Group, is spearheading the decarbonization and wastage reduction of the textile industry through large-scale textile-to-textile recycling, starting with polyester. Syre is building a production plant in North Carolina, United States, to be operational during 2024. From there, the manufacturing process and technology will be scaled up for global expansion. Within ten years, Syre aspires to have twelve plants up and running at full speed and capacity across the globe, producing more than three million metric tons of recycled polyester.

H&M Group’s overarching material ambition is to have 100% of materials either recycled or sourced in a more sustainable way by 2030. That is why H&M Group continues to collaborate with other industry players and invest in innovations

and infrastructure, such as Syre.

Syre has a plan to set up multiple production plants generating textile-to-textile circular polyester worldwide to boast quality on par with oil-based virgin polyester and superior sustainability performance, reducing CO₂e emissions by up to 85%.

The first production plant is underway in North Carolina, USA, with plans for global expansion in Asia and Europe within the next decade.

Syre will aim to provide a recycled polyester yarn with equivalent quality to virgin polyester but with a lower impact on the planet.

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“Syre marks the start of the great textile shift. We envision a world where every textile fiber sees a new day. By implementing true textile-to-textile recycling at hyper-scale, we want to drive the transition from a linear to a circular value chain by putting textile waste to use, over and over again.”

Dennis Nobelius, CEO of Syre

Archroma brings eco-friendly solutions to Techtextil 2024

■ Sayed Abdullah

Archroma, a leading innovator in specialty chemicals, showcases its “Planet Conscious+” commitment at the world’s premier technical textiles expo.

Archroma, a global leader in sustainable solutions for specialty chemicals, is bringing its latest eco-friendly innovations to Techtextil 2024. Held in Frankfurt, Germany, from April 23 to 26, this renowned trade fair focuses on technical textiles and nonwovens.

Archroma aims to empower technical textile manufacturers to achieve cutting-edge functionality with solutions that prioritize sustainability, optimized productivity, and value creation.

Sustainability Takes Center Stage

Sustainability is a growing concern across the technical textile industry. Archroma emphasizes that environmental responsibility no longer necessitates sacrificing performance or incurring

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“Our ‘Planet Conscious+’ commitment underscores our dedication to innovation and partnership. It makes the introduction of our Super Systems+ solutions even more relevant in today’s market.”

Dhirendra Gautam, Archroma Textile Effects’ Vice President of Product Marketing & Strategy,

economic penalties.

Super Systems+ for Powerful End-to-End Solutions

A centerpiece of Archroma’s presence at Techtextil is Super Systems+. This powerful suite offers comprehensive, fiber-specific processing solutions coupled with intelligent effects.



Leveraging the industry’s broadest product portfolio, Super Systems+ encompasses:

- Wet processing solutions that minimize environmental impact, encompassing everything from sizing to finishing.
- Durable colors and functional effects that enhance value and product longevity.
- Cleaner chemistries that eliminate harmful or regulated substances.
- Industry-Specific Sustainable Solutions

Archroma caters to various technical textile segments with its sustainable offerings. Here’s a glimpse of their innovations:

Engaging Visitors at Techtextil

Archroma’s team will be available at Hall 11, Booth B41, to provide expert advice and support visitors throughout Techtextil. They will also host exclusive events at their booth, including:

- “Leaving formaldehyde behind for a safer today” focusing on APPRETAN® FFX1540 (April 24, 2:30 PM)
- “A world without PFAS—Achievements and limitations” focusing on PHOBOTEX® NTR-50 (April 25, 2:30 PM)

With their “Planet Conscious+” approach, they empower manufacturers to achieve superior functionality while minimizing environmental impact.

Swedish Wool Initiative creates worsted yarn from discarded fibre

■ Asif Iqbal

For years, the Swedish wool industry faced a conundrum. More than 50% of the wool produced in the country was considered waste, primarily due to the presence of vegetable matter like straw. This wool, while abundant, was unsellable and often relegated to lesser applications such as insulation or stuffing. Excess straw residue in wool can have a significant impact on its quality, affecting its texture, appearance, and performance.

Traditional wool processing methods often struggle to effectively remove straw residue even after washing, carding and spinning, leading to waste and inefficiencies in production. Each year, raw, carded, and yarn wool comprising more than 1,700 metric tonnes are imported into Sweden. The carbon footprint of this imported wool is frequently larger than that of Swedish wool. It was a significant loss of valuable resources and a missed opportunity for the textile industry. Swedish fashion and textile manufacturers were reportedly looking more and more for locally produced, bio-based, and recyclable materials like wool, according to the Swedish Wool Initiative.



Figure: Discarded wool. © belafuori.com

Klippan Yllefabrik's Innovative Solution

Klippan Yllefabrik is a renowned Swedish textile manufacturer with a rich history of producing high-quality wool products. Known for their commitment to sustainability and innovation, they have recently made waves in the industry with their groundbreaking approach to wool processing. Klippan Yllefabrik, in collaboration with The Swedish Wool Initiative led by Axfoundation successfully removed the plant residues by introducing an additional step in the wool processing called combing. This process resulted in a soft, pliable worsted yarn that turned a previously discarded resource into a sought-after material for the fashion industry.

Worsted yarn is known for its smooth texture and durability, making it a popular choice for high-quality woven fabrics. Its production requires meticulous attention to detail and a commitment to excellence in processing. Klippan Yllefabrik has invested significant resources in research and development to address the challenges posed by excess straw residue in wool. Their innovative

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“This is a prime example of innovation that wouldn’t be possible without uniting the entire value chain, from sheep farms to industry. By coordinating Swedish wool processing with industrial requirements, we open up new opportunities for sustainable products in a variety of industries, including fashion.”

Johan Sidenmark,
project manager for the Swedish Wool Initiative.

Interesting features of the new worsted yarn

Klippan Yllefabrik’s new worsted yarn, crafted from previously discarded wool with excess straw residue, offers a unique blend of quality and performance. Despite its humble origins, this yarn boasts exceptional durability and a soft, luxurious feel, making it a top choice for discerning crafters and textile enthusiasts.

This innovative worsted yarn isn’t just a one-trick pony. Its versatility shines through in a variety of applications, from cozy knitwear and elegant home textiles to durable upholstery fabrics. With this yarn, the possibilities are endless, allowing creators to explore their craft without limitations. It offers fashion brands a sustainable material that is both high-quality and recyclable. It’s a win-win situation: the environment benefits from reduced waste, and fashion brands gain a new material that meets the growing demand for sustainable products.

Market Impact and Future Prospects

With its sustainable approach and superior quality, the yarn has garnered praise from manufacturers, designers, and consumers alike. Its positive reception highlights a growing demand for eco-friendly products that don’t compromise on performance.

approach to wool processing has led to the development of a new worsted yarn that utilizes previously discarded wool, setting a new standard for sustainability in the industry.

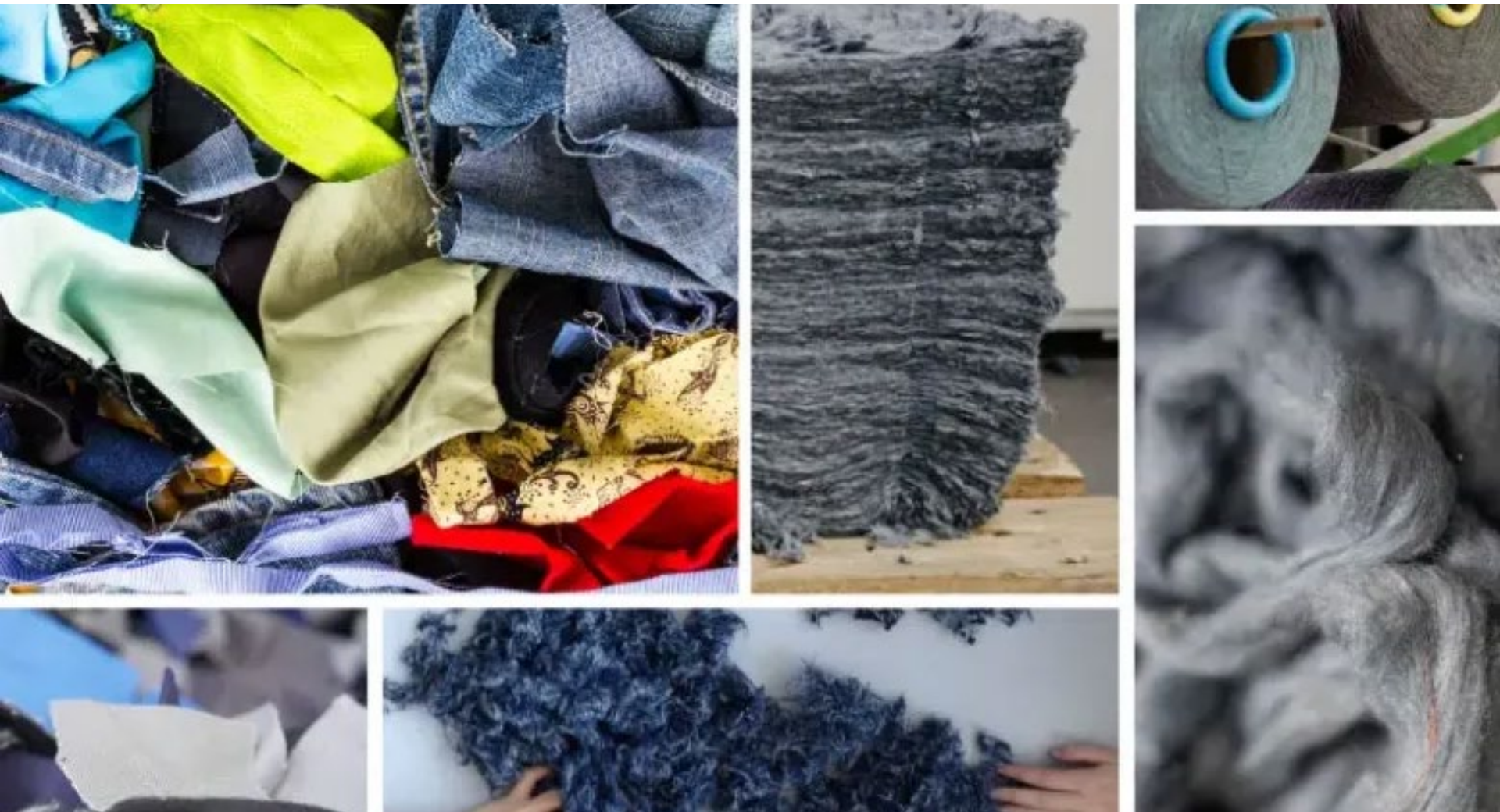
Recycling wool not only reduces waste but also has significant environmental benefits. By reusing materials that would have otherwise been discarded, Klippan Yllefabrik is contributing to the conservation of natural resources and reducing the carbon footprint of their operations.



Figure: TSWI has developed the Swedish Wool Standard which simplifies the process of selling and purchasing high-quality Swedish wool, opening up completely new market possibilities for wool rearers. © textash.com

Trützschler's TRUECYCLED Offers a holistic approach to textile recycling

■ Monir Hossain



Textile waste is a growing global problem, but Trützschler, a leading textile machinery manufacturer, is making bold strides toward a solution. Their innovative TRUECYCLED system offers a holistic approach to mechanical textile recycling, aiming to revolutionize the industry.

First Full-Liner in Recycling

Trützschler has become the first full-liner in the preparation of textile waste. This means they offer a complete system encompassing the entire process, from the initial cutting and tearing of textile waste to the carding and drawing of the resulting secondary fibers. This comprehensive approach ensures optimal control and expertise at every stage, maximizing the quality of the recycled materials.

Collaboration and Expertise

The TRUECYCLED system is a product of Trützschler's collaboration with Balkan Textile Machinery. The system has garnered significant interest, with Trützschler receiving numerous inquiries and customers already producing recycled yarns using TRUECYCLED lines. These state-of-the-art installations are meticulously configured and fine-tuned by Trützschler experts to meet each customer's specific needs.

The Importance of a Systems Approach

Recycling textile waste presents unique challenges. Torn fibers are typically shorter than virgin fibers, and a higher percentage of short fibers exists in the recycled material. Additionally,

unopened yarn and fabric particles pose processing difficulties. Dr. Georg Stegschuster, a leading researcher in textile recycling, emphasizes the importance of a systems approach to address these issues. He advocates for control over both the tearing and spinning preparation processes, with the necessary expertise for each, to achieve optimal results and minimize fiber shortening.

Balancing Gentleness with Effectiveness

TRUECYCLED prioritizes a gentle yet effective approach. In some cases, less aggressive tearing settings are employed to minimize fiber breakage. This might necessitate handling the higher proportion of unopened fabric particles in a high-performance spinning preparation line. This line would begin with a strategically configured blow room for optimal opening, cleaning, and blending of the fibers.

Advanced Technologies for Superior Quality

The system incorporates advanced technologies to ensure gentle yet effective fiber treatment. The TC 30Ri card, designed specifically for recycling materials, facilitates this process. A shortened drafting process is achieved using the integrated IDF 3 draw frame. This draw frame offers a high enough draft for excellent leveling of the short fibers while preventing unwanted “floating fibers.”



There is a lot of technological potential for improving the quality of the end-product through the right configurations and settings. There’s a growing number of examples that show how higher quality end-products can be achieved from recycled materials, and how the share of pre- or postconsumer waste in yarns can be increased without compromising on quality.

Georg Stegschuster,
Textile Recycling Researcher

A New Chapter in Textile Recycling

The TRUECYCLED system marks a significant milestone in mechanical textile recycling. By offering a holistic approach, expert control over the entire process, and advanced technologies, Trützschler is paving the way for a more sustainable future for the textile industry. With TRUECYCLED at the forefront, a new chapter in high-quality textile recycling is unfolding.

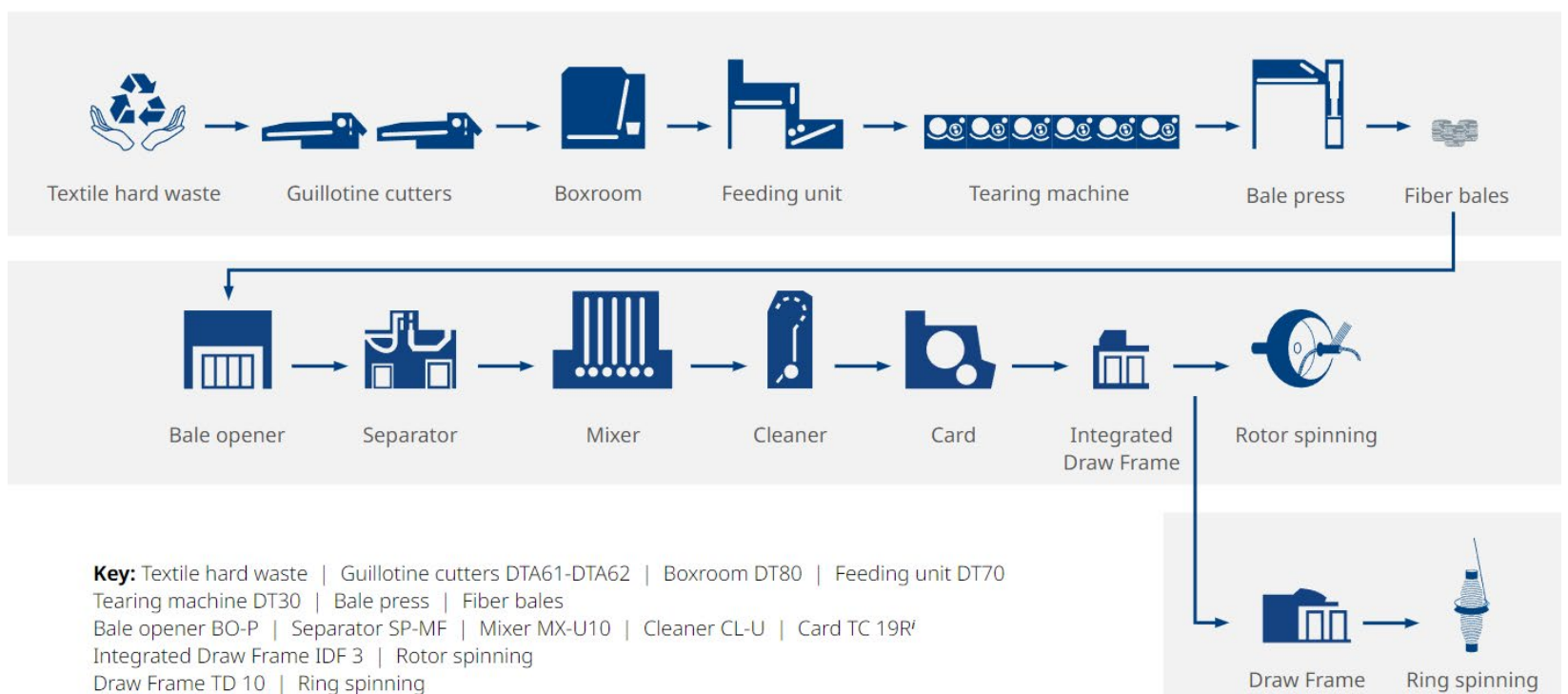


Figure: An example of a state-of-the-art recycling process Comber noil5



Source: BHARAT TEX 2024

Bharat Tex 2024 Showcases India's Textile Resilience

■ Asif Iqbal

India's textile heritage is legendary, dating back centuries, and the country is renowned for its diverse and exquisite range of textiles, techniques, and traditions. Bharat Tex 2024, poised to be the largest global textile event, celebrates this rich legacy while embracing innovation and sustainability. It celebrates India's reliability as a competitive, sustainable textile manufacturing hub across the entire value chain, from raw materials to end products.

Bharat Tex began as an ambitious vision—a celebration of India's textile heritage on a global stage. Over the years, it has evolved into a platform that not only honors traditional Indian textiles but also fosters innovation. From its inception, Bharat Tex has seamlessly blended tradition with modernity, creating a vibrant space for industry players to converge.

Bharat Tex 2024, a global textile mega event organized by a consortium of 11 Textile Export Promotion Councils and supported by the Ministry of Textiles in India featured more

than 60 agreements and more than 100 product launches. It was scheduled to take place from February 26th to 29th, 2024 in New Delhi. It is considered the largest global textile event in the country. This grand celebration of textiles brings together industry experts, manufacturers, sellers, buyers, designers, and enthusiasts from around the world. Let's unravel the key highlights that make this textile extravaganza truly exceptional:

- **Launch of the IndiaTEX Project:** A visionary four-year initiative by UNEP, aiming to expedite India's textile sector's shift towards circularity. This project sets the tone for sustainable practices and innovation.
- **International Collaborations:** Bharat Tex 2024 witnesses the signing of 6 international and 13 domestic MoUs by NIFT. These collaborations span academic partnerships, start-up incubation, research, and product development.
- **Industry Giants Participating:** The event



Source: BHARAT TEX 2024

has received an overwhelming response from leading global textile companies like Tommy Hilfiger, Calvin Klein, Vero Moda, H&M, Target, Busana Group and Lenzing, along with a lineup of the top Indian players, including Reliance, Aditya Birla, Welspun, Trident, Vardhaman, Raymond, and others. They actively engaged in Bharat Tex, recognizing India's potential and contributing to its impact.

- **Dedicated Pavilions:** Explore pavilions focused on sustainability, recycling, and showcasing the work of textile clusters like Panipat, Tirupur, and Surat. An Indi-Haat celebrates India's traditional handicrafts and handlooms.
- **Fashion Shows:** Over 10 fashion shows spread across 4 days, highlighting themes from Indian Textiles Heritage to sustainability and global designs.
- **Interactive Sessions:** Engage in discussions on emerging trends, market dynamics, and policy interventions.

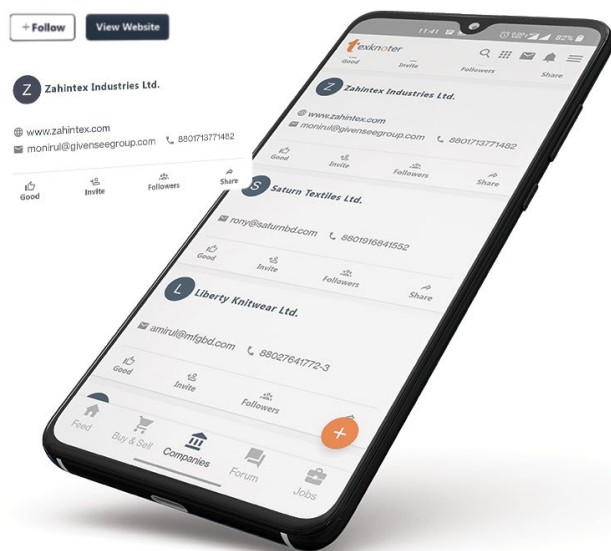
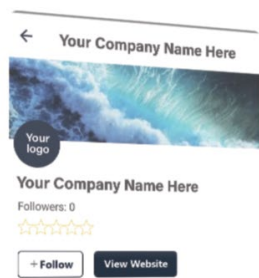
- **Exhibitions:** Witness a diverse range of traditional and contemporary Indian textiles on display.

Bharat Tex 2024 seamlessly blends tradition with innovation. Some trending technologies showcased include:

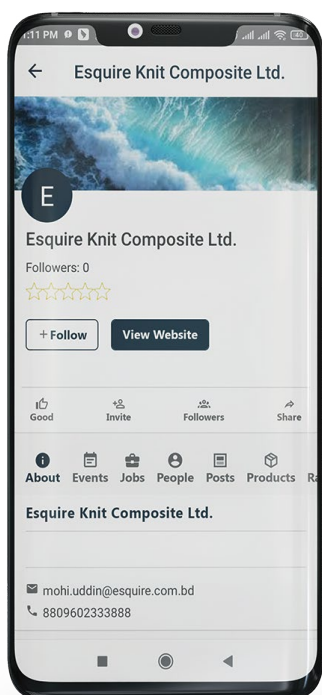
- **Circularity Initiatives:** The IndiaTEX Project, a four-year initiative by UNEP, accelerates the shift towards circularity in the Indian textile sector. It aims to promote sustainable practices and reduce waste.
- **Interactive Fabric Testing Zones:** Attendees can explore sustainable fabrics and experience different textiles through touch. These zones provide insights into fabric quality, durability, and eco-friendliness.
- **Textile Art Installations:** Upcycled and eco-friendly textile art installations add an artistic touch to the expo. These installations showcase creativity while emphasizing sustainability.
- **Masterclasses by Craftsmen:** Witness master craftsmen display skills passed down through generations. These sessions celebrate traditional craftsmanship and its relevance in modern textile practices.
- **Trend Forecasts and Product Launches:** Stay ahead with insights into emerging trends. Bharat Tex unveils innovative products and technologies that shape the future of the textile industry.



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Create & build your profile

Events

Create & Join events in a single place.

Buy & Sell

A dedicated marketplace to buy & sell products.

Jobs

Post jobs easily and get the right professionals.

Post

Share thoughts or views with people of the same interest.

