

Techtextil 2022:

Topaz PURABLE: Water-based functional layers

Trans-Textil forgoes organic solvents in breathable and waterproof PURABLE barrier systems

Trans-Textil GmbH is presenting its PURABLE functional systems based on aqueous technologies for the first time at Techtextil in Frankfurt am Main (Hall 12.1, Stand B67). The company from Freilassing / Bavaria completely avoids organic solvents in production. In combination with the PFC-free Clean4Green® finish, the water-based Topaz Elements® seam sealing tapes, the environmentally friendly transfer printing process and vegan-certified or recycled components, a technically extremely flexible and sustainable overall concept for functional textiles is created.

The basis of the PURABLE functional layers are specially developed, solvent-free formulations, which allow specific control of technical properties such as air permeability and breathability. The barrier systems are very elastic and, in combination with elastic textiles, ensure a comfortable stretch effect and a pleasant soft feel, even in multi-layer composites. With more than 50 cycles at 60°C according to ISO 6330, Trans-Textil has also proven the excellent washing properties of the new systems. When used as classic softshell products, the use of PTFE can be completely dispensed without any loss of the decisive parameter of water vapor permeability.

To ensure that they are watertight, the hydrophilic, solvent-free PURABLE membranes at Trans-Textil are processed into individual multi-layer composites using the precisely controlled in-house Point-in-Point® lamination process and achieve impermeability values of over 10 meters water column.

Synergy effects with PFC-free and solvent-free technologies

In the further functionalization for weather protection applications such as workwear, civil service, outdoor and sports clothing, Trans-Textil uses its proven PFC-free Clean4Green® finish, which is adapted to the respective laminate composite. "With this alternative and environmentally friendly surface finish, we are already achieving water repellency that is comparable to conventional fluorine-based formulations. The actual tightness against oil and other chemicals is provided by the membrane system," says Matthias Krings, Managing Director of Trans-Textil GmbH.

For the fashionable design of the functional laminates, Trans-Textil relies on the environmentally friendly transfer printing process, in which only the natural solvents water

and alcohol are used. In addition to the individual design options from logo printing to full-color motifs, the sustainable technology offers high color fastness and abrasion resistance.

Water-based seam sealing

For optimal tightness at the seams, Trans-Textil has developed solvent-free seam sealing tapes for all common laminate types. The water-based Topaz ELEMENTS® tapes enable high-quality functional textiles to be used for a long time, for example in shoe laminates, workwear, outdoor, leisure and sportswear as well as in technical ready-mades. The tapes can be customized in terms of technical properties, dimensions and design. They are suitable for washing at up to 60 degrees Celsius.

Vegan label for membranes, textiles and laminates

Membrane systems, textiles and lamination processes that have been awarded the "100% Vegan" test mark by the Pirmasens Testing and Research Institute (PFI) as well as an increased proportion of recycled components also expand Trans-Textil's sustainable portfolio. All components and processes for Trans-Textil's own products and contract processing are also tested and certified for their human-ecological soundness in accordance with the current requirements of STANDARD 100 by OEKO-TEX®.

Concrete contribution to the overall balance in the supply chain

Through the increased use of aqueous and PFC-free technologies, Trans-Textil significantly reduces the ecological footprint along the supply chain as well as in production, during processing and use. "With these concrete contributions to the overall balance, our team is taking further steps in the consistent implementation of our sustainability goals," explains Matthias Krings.

Trans-Textil has already proven several times that this way is technically successful in addition to the ecological advantages - for example with the "100% Vegan" certified breathable artificial leather AQUAIR®, which is manufactured completely without organic solvents. The switch to purely aqueous systems was also successful in the membrane systems for the VAP® lightweight construction process, for which Trans-Textil holds joint patents with AIRBUS. "The manufacturers of wind turbines for generating energy from renewable sources in particular check the environmental impact of the materials used very closely and call for PFCs and organic solvents to be dispensed with worldwide," explains Matthias Krings, the background to the success.

Trans-Textil has created ideal conditions through the long-term development of close partnerships in a predominantly regional supply chain. The company continuously invests in a qualified team, its own application and textile technology laboratories and plant technology for

Press information



processing aqueous formulations, which offer short distances from development to implementation at the Freilassing site.

About Trans-Textil:

Trans-Textil GmbH from Freilassing in Berchtesgadener Land is one of the technologically leading companies in the development and manufacture of functional textiles through lamination, membrane technologies, coating, finishing and printing processes. The company documents its sustainable commitment that goes beyond the legal requirements, among other things, through the certification of its products "Made in Germany" according to the criteria of the STANDARD 100 by OEKO-TEX®, the certification according to EN ISO 9001, EN ISO 14001 and OHRIS in the area of occupational safety and plant safety. The functional textiles are used in personal protective equipment, shoe components, medical and technical applications as well as in highly developed solutions for the outdoor, sports and leisure clothing sectors.