

Textile Innovation on show at Milano Unica, 1-2 February 2022

The Innovation Area was born in 2020 from a collaboration between Milano Unica and TexClubTec, the technical and innovative section of Sistema Moda Italia, with the aim of responding to the growing need for product, process and service innovation, now absolutely essential for any manufacturing company

Product innovation, however, could be more relevant if resulting not of a single production phase, but of an innovative approach spread throughout the supply chain, from raw materials to the finished product.

In the Innovation Area, located in Hall12, there will therefore be companies representing the entire production chain and cutting-edge products will be presented, characterized by the ability to offer performance specific or made with innovative processes, thus offering a rich and diversified overview of the main companies in the sector

In addition, the setting up of an exhibition Forum focused, in this edition of February 2022, on "Textile Materials for Activewear and Outdoor Clothing", intends to offer an overview of innovative materials capable of offering performances of extraordinary excellence in maintaining the well-being of body in terms of versatility and comfort.

Which are the functionalities required to textiles used in this field and how to obtain them?

Outdoor clothing, in variable climatic conditions, is conceived as a set of garments, placed on top of each other, adaptable to the conditions of the moment by adding or removing them. **Basically, there are three functions that clothing items must perform towards the human body: to be breathable, insulating, protective.**

Thanks to technological innovation, the characteristics of textile materials have become increasingly refined, obtaining exceptional performance in terms of versatility and comfort.

In addition, with the development of multifunctional materials, garments with additional characteristics have been obtained, such as abrasion resistance, UV protection, lightness, etc., or able to perform multiple functions. The garments that can be used in the different layers can be characterized as follows:

- **First layer**

These garments are in direct contact with the skin, and their function is to promote the dispersion of sweat and water vapor outwards. The goal is to keep the body warm and dry.

- **Second layer or Intermediate layer**

This definition includes garments capable of performing an insulating function. This function must be performed by ensuring thermal insulation and breathability.

- **Third layer**

It is the outermost layer. In addition to having to be breathable, its function is to provide the body with protection from external atmospheric agents such as wind, cold, snow and rain. In many cases, some protection from impacts, abrasions is also required.

What kind of textiles will be presented in the Forum?

• **First layer:**

Various types of **circular knitted fabrics** also embossed or brushed or extremely light for athleisure collection, knitted fabrics produced with recycled yarns and chemicals with low environmental impact with a lower consumption of natural resources and **warp knitted fabrics** with properties such as: bielastic, breathable, anti UV, shape retention, no see through, easy care, free cut, thermoregulating, etc. (Company: *SITIP*).

• **Second layer or Intermediate layer:**

Wadding made with 100% recycled silicone polyester (post-consumer), **Fusible Interlining** with special resin for perfect adhesion, even on fabric with waterproof, windproof membranes or polyurethane coatings; **Interlining with membrane** to prevent feathers and fibers from leaking through the fabric or seams; **Fusible polyurethane film** (Company: *CHARGEURS INTERFODERE ITALIA*).

Extremely light paddings from recycled cashmere, polyester and camel hair or in PLA with thermoregulating, breathable and smart moisture management properties (Company: *IMBOTEX*).

Warp knitted fabrics or circular knitted fabrics, various types and functionalities: abrasion resistant, comfort stretch, bielastic, 2D effect, quick dry, breathable (Company: *SITIP*).

- **Third layer:**

The **Ski suit** by *RADICIGROUP* and *DKB* is an all-round application of ecodesign and circular economy principles to fashion and garment making. The ski suit, consisting of jacket and trousers, is fashioned with a fabric made of **RENYCLE**, a RadiciGroup yarn obtained from mechanically recycled polyamide (nylon), which affords notable savings in energy and water consumption, as well as lower CO₂ emissions. In addition, the suit's padding and numerous accessories, such as zippers, Velcro, buttons and thread, are also made of polyamide. **The end result is an almost mono-material garment that significantly facilitates end-of-life recycling.** It can be more easily converted into polymers for use in the manufacture of ski boot components and bindings, in addition to applications in the automotive and furnishing industries, or in any other sector requiring the characteristics of high performance polyamides. Thanks to the very nature of nylon, the fabric made of **RENYCLE** makes the new ski suit significantly much lighter and extremely less bulky, compared to the conventional kind of suit.

The RadiciGroup ski suit is a garment that meets the requirements of both the Second layer (thermal insulation and breathability) and the Third layer (protection from the weather; resistance to impacts, abrasions and tears). (Company: *RADICIGROUP* and *DKB*)

The **YelcoDry knitted fabrics** has an inner side in polypropylene to guarantee comfort, breathability and avoid the appearance of bad odours and an outer side in cotton for its absorption properties and to maintain the possibility of colour customization (Company: *ARGAR*).

Warp knitted fabrics for outerwear / bielastic techno sartorial with properties such as: comfort stretch, UV protection (UPF 50+), skin comfort (Company: *SITIP*).

In addition, yarns, fabrics, nets or finished products made with:

- **"Ecoyarns" ring yarns** produced with sustainable, recycled or natural raw materials: in particular **NYLON BIO** yarn, made with staple Nylon 6.6 characterized by a rapid **biodegradation process**; **CRABYON** yarn produced with chitin-chitosan deriving from **recycling of the shellfish carapace**, which confer antibacterial properties, the brand new yarns containing cellulose fiber obtained from orange **ORANGE FIBER** and **TENCEL™** Lyocell from wood (Company: *POZZI ELECTA*).
- **Blended wool / HPPE Black 70/30% yarns:** blend of 16,5 micron wool and HPPE Black (High Density Polyethylene). The aim of this product is to develop first layer sweaters and trousers with a "reinforced wool" (reinforced

by HPPE) resisting to abrasion, tearing and, to a lesser extent, cut resistance, maintaining wool properties such as: comfort, warmth, freshness, breathability, touch. Intended use as a first layer for winter sports. Samples of the developed jerseys will be presented. (Company: *FILTES INTERNATIONAL*).

- **HPPE Black / PA 75/25%:** HPPE provides good anti-cut, anti-abrasion and mechanical resistance properties. Ideal for first layer sweaters and trousers for personal protection. Possible end use also in cycling, climbing, running and many others. (Company: *FILTES INTERNATIONAL*).
- **Seamless finished items developed with TENCEL LUXE yarn** (eco botanic filaments). Companies: yarn by *LENZING*, twisting by *GHEZZI* and garments by *CIFRA and W.BLUM*.
- **Technical and fashion nets**, developed also from recycled yarns, will be proposed in different finishings (Company: *CITTADINI*).

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