

How Component Innovation is Driving Sustainable Footwear

In recent years, the footwear industry has been undergoing a crucial transformation in the field of sustainability. By its nature, the footwear production process often involves energy-intensive activities, among them there is the use of solvent-based adhesives or the involvement of complex multi-material components that are hard to recycle. For this reason, finding solutions for the sustainable innovation of the sector is not an easy task, but it is becoming mandatory for the industries involved to start working in this direction. Some of the main efforts are usually directed towards three main areas: the choice of materials, a more efficient manufacturing and the extension of product life.

As awareness grows about the environmental toll of fast fashion, companies across the value chain—from raw material suppliers to finished product brands—are integrating sustainability into every phase of design, production, and lifecycle management.

Two recent innovations stand out for their ability to combine high performance with a reduced environmental footprint: Barcellona by Carnevali and FIBERGUM by Davos. These products exemplify best practices in sustainable materials, responsible manufacturing, and circularity.

Founded in 1908 in Italy, Carnevali has long specialised in reinforcements and adhesives for shoes, leather goods, and apparel. Its Barcellona material is designed for high-stress footwear areas such as toe caps and counters. But what makes it really different?

First of all, its origins. Barcellona is made from recycled leather, and its sustainable origins are supported by the GRD (Global Recycled Standard) certification which shows its compliance with the environmental standards. Secondly, it is highly performant, especially under mechanical stress and external elements. Finally, its composition enables optimal waste management with the result of supporting a product process more efficient and environmentally friendly.

European rubber and textile specialist Davos recently launched FIBERGUM, a next-generation blend for sheet and sole production. The formulation incorporates approximately 20–25% plant-derived fibers, which enhance both abrasion resistance and overall mechanical strength when compared to standard synthetic rubber. This not only boosts performance but also supports environmental goals by limiting reliance on synthetic compounds and chemical additives. Additionally, all materials used in FIBERGUM are sourced and manufactured locally in Italy, thus helping to reduce the product's ecological footprint. The efforts of Davos in the field of sustainability is reinforced by the ISO 9001 certification and by its adherence to REACH regulations, which govern the safe use of chemicals in the EU.

Innovation in sustainability doesn't always come from flashy end-consumer brands. Sometimes it starts with the components—the adhesives, reinforcements, and textile treatments that quietly make up the backbone of the product. Carnevali's Barcellona and Davos's FIBERGUM demonstrate that it's possible to align performance with ecological responsibility from the inside out.

References

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