



## **Sport Infinity – Defining the future of material recycling**

- BASF helps make sporting goods more sustainable
- New high-performance materials to enable infinite recycling of sports shoes and ultimately single-step production

BASF is one of ten members of industry and science working together on the project "Sport Infinity". Spearheaded by adidas and funded by the European Commission, the three-year project aims at identifying and developing recyclable, partly waste-based, textile fiber reinforced

customizable sporting goods.

The research program focuses on football sporting goods, in particular shoes. In a design-driven approach, the automation potential of various molding processes will be exploited, potentially enabling the production of a shoe in one step. The goal is a new breed of sporting goods that will not be discarded, but reused. A used football shoe, for instance, could be collected and shredded into tiny pieces, of which every gram is reprocessed. Combined with virgin material and reinforced with selected fiber from similar or alternative waste sources, a new shoe can be manufactured.

composites. These materials enable the fast production of easily

The challenge lies in achieving the desired product performance level in a repeated material recycling loop. BASF's extensive polymer know-how will play an integral part in developing new materials and tailoring them to the manufacturing process. Recyclability is a determining parameter in the material selection process.

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"We are delighted to join nine highly ranked partners in this project" says Juergen Weiser, Director Technology, Performance Materials, BASF. "We are focusing on special new polymers with a broad mechanical property range. The goal is to create a recyclable product that can be fine-tuned to a variety of applications and related processes. Developing new and disruptive cradle-to-cradle sporting good concepts together with partners along the entire value chain is a perfect fit for us."

## From consumer to product designer

Polymers, either from industrial or sportswear waste sources, will be reengineered to the key manufacturing processes for *Sport Infinity*. These processes utilize almost every gram of material and do not produce waste. Moreover, they enable consumers to customize their football shoes in shape, color, and design. Consumers can thus become creators without having to worry about waste. Ultimately, the goal is to optimize the process to a degree that enables the highly automated production of shoes in a single process step.

In order to turn this vision into reality, *Sport Infinity* brings together partners from various disciplines. From specialty equipment manufacturers to processing experts, from major chemical suppliers to fiber and textile processors, from industrial design to knowledge management, as well as the sportswear brand and a football academy partner. Consequently, the project consortium covers the entire value chain to achieve one common goal: sustainable, customizable high performance football sporting goods made in Europe.

## **About Sport Infinity Consortium**

The European Commission kicked off the Sport Infinity project in June 2015 together with ten industry-leading experts: <a href="mailto:adidas\_AG">adidas\_AG</a>; <a href="mailto:BASF">BASF</a>; <a href="mailto:KISKA GmbH">KISKA GmbH</a>; <a href="mailto:FILLGesellschaft\_m.b.H.">Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)</a>; <a href="mailto:OECHSLER\_AG">OECHSLER\_AG</a>; <a href="mailto:University">University of Leeds</a>, <a href="mailto:Centre\_Centre\_Centre">Centre for Technical Textiles (CTT)</a>; <a href="mailto:Association\_CETI">Association\_CETI</a> (Centre\_Européen\_des\_Textiles\_Innovants); <a href="https://example.com/Hypercliq\_E.E.">Hypercliq\_E.E.</a>; <a href="mailto:SportsMethod\_Ltd">SportsMethod\_Ltd</a>.

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## **About BASF's Performance Materials Division**

BASF's Performance Materials division encompasses the entire materials know-how of BASF regarding innovative, customized plastics under one roof. Globally active in four major industry sectors - transportation, construction, industrial applications and consumer goods − the division has a strong portfolio of products and services combined with a deep understanding of application-oriented system solutions. Key drivers of profitability and growth are our close collaboration with customers and a clear focus on solutions. Strong capabilities in R&D provide the basis to develop innovative products and applications. In 2014, the Performance Materials division achieved global sales of €6.5 billion.

More information online: <a href="https://www.performance-materials.basf.com">www.performance-materials.basf.com</a>