

NEWS RELEASE

EUR 25 million subsidy granted: Industry Consortium receives funds for polyethylenfuranoate (PEF)

- / European Joint Undertaking on Bio-Based Industries (BBI) awards consortium with 25 million Euro
- / Synvina coordinates industry consortium "PEFerence"
- / Grant for establishing a complete value chain for the use of bio-based furandicarboxylic acid (FDCA) for PEF
- / Synvina intends to build a 50,000 tons plant for FDCA

The European Joint Undertaking on Bio-Based Industries (BBI), consisting of representatives from the European Union and the biobased industry, granted 25 million Euro to "PEFerence", a consortium of eleven companies. The grant supports the establishment of an innovative value chain for bio-based raw materials as well as chemicals and materials based on polyethylenefuranoate (PEF). It includes the intended construction of a 50,000 tons FDCA reference plant, the main chemical building block for the production of PEF. Synvina will be coordinating the "PEFerence" project.

BBI acknowledges the engagement of "PEFerence" for more ecofriendly materials and end products, resulting in substantial benefits for the environment and society. Based on renewable feedstock, products made of PEF will significantly help to replace fossil-based packaging materials and to reduce greenhouse gas emissions, following BBI's assessment. PEF is an innovative polyester suitable for applications such as bottles, films and polyurethanes. June 08, 2017 P246/17

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PEF: benefits for environment and society

PEF bottles can be recycled and used again as raw material for bottles, as well as for packaging and textiles. Additionally, PEF offers superior product properties in comparison to conventional polyethylene terephthalate (PET) and provides major advantages for end consumers. Improved barrier properties for gases allow to redefine packaging solutions based on PEF. It also offers a higher mechanical strength, thus thinner PEF packaging can be produced and fewer resources are required. PEF is suitable to produce bottles for carbonated and non-carbonated beverages, foil pouches as well as personal and home care products.

Consortium from raw material producer to brand owner

Besides Synvina and its shareholders BASF and Avantium, the partners in the PEFerence consortium are:

- Tereos Participations (France),
- Alpla Werke Alwin Lehner GmbH & Co Kg (Austria), OMV Machinery Srl (Italy) and Croda Nederland B.V. (The Netherlands),
- Nestec Sa (Switzerland) and Lego System As (Denmark),
- Nova-Institut f
 ür politische und ökologische Innovation GmbH (Germany) and Spinverse Innovation Management Oy (Finland).

"The grant of the BBI is a strong signal for Synvina and our partners along the value chain to continue our mutual process to make PEF commercially available", said Patrick Schiffers, CEO of Synvina, and continued: "To open up a market for a new plastic based on renewable feedstock is a major challenge that we best meet with strong partners and our combined expertise. We share the common goal to get PEF commercially to the market thereby providing the market materials with



superior properties and to establish sustainable and bio-based plastic value chains."

About "Public Private Partnership on Bio-Based Industries"

The European Joint Undertaking on Bio-based Industries (BBI) is a public-private partnership between the European Union and the Bio-based Industries Consortium aiming at increasing investment in the development of a sustainable bio-based industry sector in Europe. It aims at providing environmental and socio-economic benefits for European citizens, increasing the competitiveness of Europe and contributing to establishing Europe as a key player in research, demonstration and deployment of advanced bio-based products and biofuels. The BBI Joint Undertaking will also play an important role in achieving a bioeconomy in Europe. Please find further information here.

About Synvina

Synvina is a Joint Venture of Avantium and BASF, located in Amsterdam. Operating a pilot plant in Geleen, the Netherlands, Synvina produces and markets furandicarboxylic acid (FDCA) from renewable resources on pilot plant scale and markets the new polymer polyethylenefuranoate (PEF). Synvina aims to commercialize their activities in the future. FDCA is a building block for various products. Most significantly the polyester PEF, which is suitable for food and beverage packaging and for fibers for carpets and textiles. For the packaging industry, PEF offers superior characteristics like improved barrier properties and a higher mechanical strength enabling thinner packaging. PEF is recyclable. Our strength lies in the combination of our mother companies' expertise. We merge technology leadership with market leadership. Creativity with reliability. Innovative spirit with production excellence. Together, we aim to become market leaders in FDCA and PEF. Please find further information at www.synvina.eu.