



Project Title: DuroBast – Durable and resource saving composite structural components based on newly pre-treated and processed **bast** fibres

Partners:

- Institut für Textiltechnik der RWTH Aachen
- Fraunhofer LBF
- Leibniz-Institut für Verbundwerkstoffe GmbH
- Wagenfelder Spinnereien GmbH
- Lehrstuhl für Werkstoffprüftechnik der TU Dortmund
- nova-Institut GmbH
- Hübner GmbH & Co. KG
- Rhenoflex GmbH
- Silbaerg GmbH
- Gustav Gerster GmbH & Co. KG

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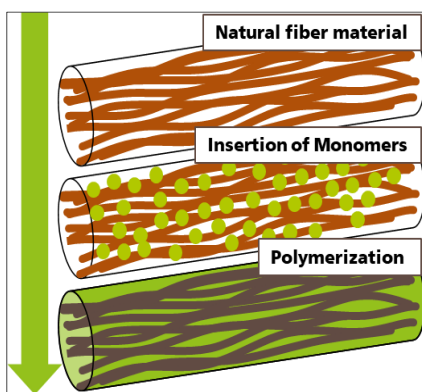
Mission Statement:

In the project "DuroBast", innovative and bio-based materials are developed which can be used as materials for the production of structural components for different applications on a large scale. The aim is to produce thermoplastically formable natural fibre-reinforced plastics (NFRP) with low moisture absorption and improved mechanical properties. The NFRP should be able to be used in areas that were so far inaccessible to natural fibres due to insufficient strength and high moisture absorption capacity.

Approach:

Bio-based plastics will be used as the polymer matrix to achieve 100% bio-based materials. The project partners are working together along the value chain from fibres to application to develop solutions for achieving the goals and transfer the project results to the specific application fields of automotive interiors, sports equipment and the public transport sector. Customized characterization methods provide detailed information on the property profile of the materials as well as realistic lifetime predictions under various conditions

of use. A parallel economic analysis makes sure that only economically feasible solutions are developed at an early stage. In this project, the focus is on the selection of conditioning and pre-treatment of natural fibres with the aim of making the fibres hydrophobic in a way that reduces the water absorption capacity of the composites. To achieve this goal, on the one hand innovative fibre conditioning will be used and on the other hand the fibre cavities and gaps will be filled with a polymer so that water absorption is prevented. Another focus of this project is to evaluate at which point in the process chain the fibre pretreatment can be carried out most economically and effectively.



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