

Mould Pulp – Development of Durable, Fully Bio-Based Thermoplastic Composites from Bioplastics and Pulp Fibres for Injection Moulding Applications

The Swedish company Invention together with an industrial consortium has developed a promising wood-polymer material from cellulose pulp and PLA. Launched by Södra under the name DuraPulp® the material shows good mechanical properties, a perceived naturalness, nice tactile properties and can be dyed with clear colours. By now, DuraPulp® is only available in form of composite pulp bales to be further processed by a specifically compression moulding into final products. The research project »MouldPulp« aims to develop a processing technology that allows making injection moulded parts out of DuraPulp® but keeping the naturalness material identity. A multidisciplinary and international team from Sweden, Finland and Germany led by Fraunhofer UMSICHT is working on this.

An initial market research has brought to light that soft characteristics like clear colours in combination with natural appearance and natural touch are valued. At the same, limiting factors for the use of MouldPulp are mechanical properties like heat distortion resistance and material strength.

Furthermore, the market research has shown multiple niches for MouldPulp. Experts predict market potential across several branches, especially in consumer articles, electronics / IT and automotive. Most promising applications are seen in design and decoration, toys, and household items.

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