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MOULDPULP BIOCOMPOSITE FOR INJECTION MOULDING

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ISSUE

The motivation for the project was the promising wood-polymer concept DuraPulp® from cellulose pulp and PLA. It is fully renewable, shows good mechanical properties, a perceived naturalness, nice tactile properties and can be dyed with clear colours. It won a lot of design awards and it became obvious the market should increase with a wider variety of plastics processing technologies available.

Due to this the transnational project team from Sweden, Finland and Germany developed a processing technology that allows making injection moulded parts out of DuraPulp® but keeping the material identity.

SUMMARY

The injection mouldable MouldPulp material is nearly 100 % bio-based from wood and agriculture resources. The processing behaviour as well as the product properties fulfil the industrial and consumer requirements. Thin-walled injection moulded parts are producible on conventional plastics machinery (including hot runner systems) in clear colours and with acceptable cycle times.

The measuring of the emotional performance of the MouldPulp material on test persons showed that the MouldPulp samples received on average significantly higher ratings than PP samples on quality and pleasantness.

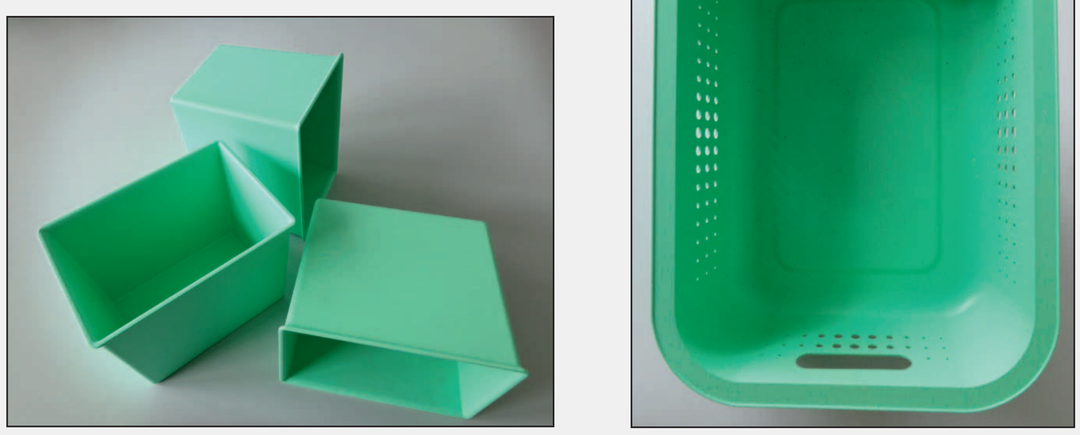
PROJEKT LEADER

Fraunhofer UMSICHT is a partner for the realization of ideas for sustainable, industrial products. The department “Bio-based Plastics” is focused on polymer chemistry, material development, plastics processing, applications, and industrial scale-up of novel bioplastics.

RESULTS

Products from DuraPulp®: Kofes (left) and Parupu® chair (right)

Injection moulded granules and test specimen



Injection moulded products from MouldPulp

CONSORTIUM

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MouldPulp