

PULPACKTION

Optimised moulded pulp for renewable packaging solutions



<http://www.pulpacktion.eu>

Summary

Project PULPACKTION will develop cellulose-based packaging solutions for the specific demands of the food and electronic packaging industries, reducing dependence on non-renewable fossil fuel based plastics.

The PULPACKTION project will take advantage of the flexibility in wet-moulding production of wood pulp based materials. Different types of wood pulp additivated with biopolymers and other bio-based compounds in order to tailor the final properties of the resulting wet-moulded materials.

To fulfil barrier properties required for PULPACKTION's specific packaging applications using a fully bio-based approach, new bio-based polymer blends will be developed for being processed into multilayer films, composites and coatings that will deliver 100% bio-based integral packaging with similar properties to existing fossil-based packaging. Additionally, a 100% biobased inks together with a specific QR codes will be used for implementing a fully traceability system.

Type of Action:

Innovation Action -
Demonstration

Value Chain: VC2 – forest-based

Start date: 01 October 2016

End date: 30 September 2020

BBI JU contribution: € 8,303,374.05

Objectives

- Improvement of existing wood pulp wet moulded materials for the development of tailored-to-purpose pulps
- Improvement of current technology of cellulose wet moulded productions
- To produce specific bio-based plastics materials to reach final product packaging and shelf-life requirements
- To develop sustainable final packaging materials able to reach targeted renewability criteria's cited as sustainability indicators
- To validate final packages in an industrial environment
- To lower the energy consumption of the wet moulding process reduction of 20% in the weight of the bio-based packages compared to similar fossil-based solutions
- CO2 emission reduction of more than 50% compared to competing fossil-based packaging solutions
- To increase the competitiveness of the European pulp, board and paper making industries

Expected impacts

- Delivering a safe 100% bio-based and biodegradable product. Products are expected to be at least 10% lighter than the fossil alternatives at the same functional properties and show a radically improved environmental footprint over the product lifecycle
- More than 50% CO2 emission reduction compared to a competing fossil-based packaging material
- Opening up new applications and markets and increase the competitiveness of the European pulp, board and paper making industries, additionally showing high potential in terms of job creation in rural areas, moreover showing high potential for replicability in Europe

Project coordination

- Rottneros Packaging AB (Sweden)
- Borregaard AS (Norway)
- Genencor International BV (The Netherlands)
- Rottneros AB (Sweden)
- Novamont SPA (Italy)
- Purac Biochem BV (The Netherlands)

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- Ineo Group GmbH (Germany)
- MI-PLAST D.O.O. (Croatia)
- Innovacio i Recerca Industrial i Sostenible SL (Spain)
- Chimigraf Iberica SL (Spain)
- Instituto Tecnológico del Embalaje, Transporte y Logística (Spain)
- Innventia (Sweden)

Organisation name: Rottneros Packaging AB (Sweden)