E0_Formaldehyde-Design of taylor-made adhesive systems for the production of low formaldehyde emission wood-based panels

Sonae Indústria is world leader in the production of wood-based panels, being also a urea-formaldehyde resins (UF) producer. These resins are still the most widely used adhesives in the manufacture of wood-based panels, mostly due to their high reactivity, low cost and excellent adhesion to wood. The greater drawbacks are the low moisture resistance and the formaldehyde emission during panel manufacturing and service life. We intend to develop gluing solutions "taylor-made", worldwide innovative, considering the operation scale of SONAE. The strategy to follow will include three approaches: optimisation of UF resin synthesis at laboratory and industrial scale; develop a broad spectrum of catalysis systems for UF curing and the combination of high performance urea-formaldehyde resins with added chemical formaldehyde scavengers. The synergetic action should provide panels that comply with product specifications imposed by customers, concerning mechanical properties and low formaldehyde emission, without loosing productivity and quality, or increasing considerably the production costs.

Title of project: E0_Formaldehyde-Design of taylor-made adhesive systems for the production of low formaldehyde emission wood-based panels

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Partner: Euroresinas (Sonae Indústria), FEUP (Faculty of Engineering- University of Porto), IPV (Polytechnic Institute of Viseu) and RCP(Competence Network in Polymers)

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