

Contract No: 99 BE 422

Title: Innovative NIR Methodologies for the Determination and Control of Stability of Aminoplastic resins

Duration: 01/01/2000 – 01/09/2001

Abstract

Via this project CHIMAR aimed at the development of methodologies for monitoring aminoplastic resin synthesis and objectively assessing their quality and performance as binders. The project involved the online NIR spectroscopic monitoring of resin synthesis at laboratory and pilot scale as well as the development of correlations between the resin's chemical structure and performance. The final target was the online monitoring at manufacturing units in order to ensure production reproducibility and prevent manufacturing errors.

Parallel goals included: i) adapting our know-how to a broader range of raw materials, ii) producing resins of improved stability and performance, and iii) developing modified know-how to be licensed to customers with specific operating conditions. Online monitoring of the synthesis reactions was instrumental in achieving these goals. A further project task was the use of NIR spectroscopic method as a non-destructive method for off-line or on-line evaluation of the quality and suitability for use of laminating paper.

The technology developed is now protected through international (PCT) patent applications PCT/GR01/00049 and PCT/GR02/00005.