

## Recent advances in resin technology for wood composites

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### ABSTRACT

CHIMAR HELLAS S.A. is an innovating, global technology provider for the resin and wood-based panel industries. It offers manufacturing and research expertise in products and processes for producing particleboards, fibreboards, plywood, oriented strand boards, laminating papers.

On-going research at CHIMAR HELLAS has strongly focused on improving panel product performance, thus leading to recent developments on:

- **FORMALDEHYDE-FREE PANELS** - Resin systems for producing formaldehyde-free panels (panels with formaldehyde emission at the level of natural wood and even as low as Super E0 emission class (F\*\*\*\*) according to JIS A 1460)
- **DRY RESINATION** - Systems for enabling effective dry resination in MDF production (specially prepared resins and resin additives, the combination of which helps to avoid “glue spots” by dry blending of the fibres and resin mix)
- **GNOSSI** - Application of Near-Infrared Spectroscopy for on-line monitoring of paper impregnation to determine a) weight percent volatiles content and b) percent resin pick up. Also application of Near-Infrared Spectroscopy for determination of the usability of laminating paper prior it is pressed on the panels.

These technologies have been proven by CHIMAR at the lab or pilot scale and the most successful options have been verified industrially, in direct comparison with commercially applied systems.