

CHIMAR HELLAS S.A.
Global Technology Provider
Serving the Resin and Panel Industry

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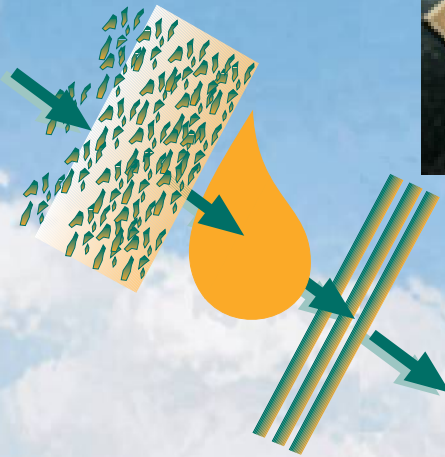


Company Profile

- ❖ CHIMAR develops and provides technology for the industrial production of resins and chemicals for wood-based panels (technology licensing, manufacturing support, application support)
- ❖ CHIMAR procures chemical plants for producing formaldehyde, resins and chemical additives (industrial engineering, project management, commissioned construction, process support)
- ❖ CHIMAR offers customer focused R&D, technical support, advanced training, testing and evaluation services - it offers knowledge
- ❖ CHIMAR acts globally - it is a no frontier-service company
- ❖ CHIMAR focuses on providing green technologies and on fulfilling the eco-efficiency principles
- ❖ CHIMAR offers value-added services (quality management systems, industrial property rights protection, accredited lab testing)



Wood Based Panels / Composite Wood Panels



Applications of Wood Based Panels



CHIMAR Green Technologies

Aims/challenges

- ❖ Protect the health of working personnel and product users
- ❖ Eco-efficiency
- ❖ The 3Fs: Food-Fibre-Fuel
- ❖ Climate change



CHIMAR Response

- ❖ Resins from renewable resources
- ❖ Panels with F-emission at the level of natural wood
- ❖ Halogen-free fire resistant wood-based panels
- ❖ Panel recycling technologies
- ❖ Panels from annual plants (strawboards)



Portfolio of products & services

- ❖ Formaldehyde based resins - all types (UF, UMF, MF, MUF, MUPF, PF) for all panel types (PB, MDF, OSB and plywood) & grades (standard and moisture resistant)
- ❖ Impregnation syrups – UF and MF (single/double impregnation)
- ❖ Low emission systems (EPF-S, CARB II, F****) down to natural wood levels
- ❖ Bio-based resins – derived from renewable biomass products or by-products
- ❖ Specialty resin systems for laminated flooring, doorskins, MDF mechanical blending
- ❖ Additives – resin hardeners, F-scavengers, resin extenders, fire retardants, water resistance promoters, recycling agents
- ❖ Additives for impregnation syrups – wetting agents, release agents, hardeners
- ❖ Formaldehyde, UFC, Resin, Impregnation syrups and Additives plants
- ❖ Processes/Solutions for cost savings in resin & panel production
- ❖ Testing and evaluation services (lab and pilot scale), industrial trials
- ❖ Quality management, industrial property rights protection, accredited lab testing



Resins from renewable resources

- ❖ Partial substitution of resin raw materials with biomass products:
 - Industrial scale–biomass pyrolysis oil, tannin, liquefied olive stone
 - Experimental scale–soy, lignin, pulping spent liquor, cashew nut shell liquid, liquefied wood, vinasse, algae biomass
- ❖ Totally natural resins – only experimental



CHIMAR in Figures

- ❖ 25-strong team (chemistry, chemical, electrical & computer engineering, forest & wood science, petroleum technology, finance and business administration)
- ❖ Technology applied in more than 70 industrial plants located in more than 36 countries
- ❖ More than 5% of the annual world wood panel production uses the resins and chemicals of CHIMAR technology
- ❖ 34 years expertise in the formaldehyde-resin and wood panel industry



34 Years Expertise in 36 Countries

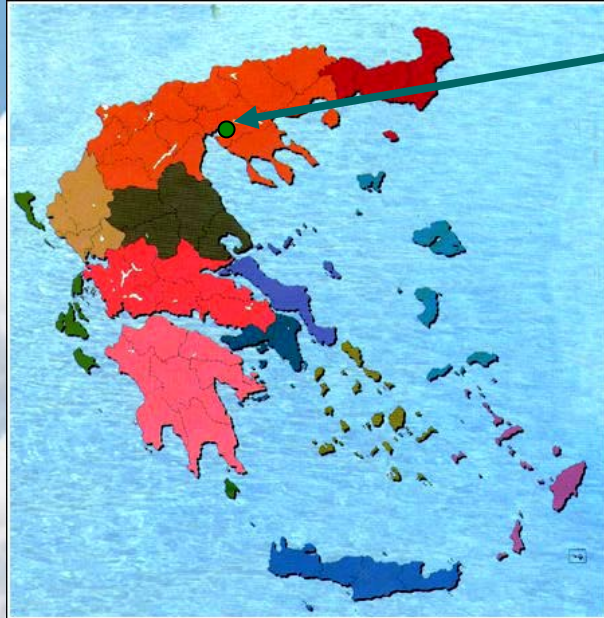
Indicative references

 Hadjilucas Shelman Alfa Wood Akritas	 Flakeboard	 GPC Química	 Borg Group	 Poulina/Cetiba
 Sapemus	 Duraplay	 Wood Chemicals P.G. Bison	 Finsa Group	 UPM-Kymmene
 Kronospan Bulgaria EOD	 Alto Parana	 Karpatsmoly		





Location & Contact Details



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EN ISO/IEC 17025 accredited lab
certificate no. 712

