



## SONAE INDUSTRIA WOODFORCE

### Turnover

- 1 billion €

### Employees

- 5,500

### Branches

- 27 plants on five continents



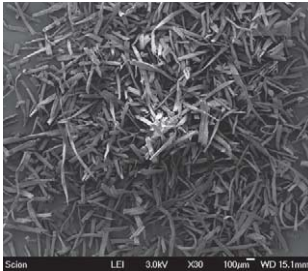
SONAE INDUSTRIA (Portugal) and SCION (New Zealand) have worked in a global partnership for several years in order to develop a new innovative and patented wood fibre technology. The concept was to develop an engineered MDF fiber dice (Wood Force) as the leading natural fiber reinforcement solution to replace glass fibre reinforced compound. A secondary market target is as a replacement for mineral fillers in weight reduction applications for composites.

The basic problem to be solved was to develop a mass produced & cost effective, easy and ready to use, reliable and consistent natural fibre technology for the injection moulding industry. The target was to successfully penetrate the large thermoplastic compound market in automotive, packaging, appliance, electronics and consumer markets by offering the same product worldwide to multinational OEMs.

The main aspects of this innovation:

- Using the well known MDF industrial process to mass produce refined softwood fibre,
- Replacing the thermoset resin content with dispersing chemistry,
- Dicing the resulting panel for easy gravimetric dosing in the process of thermoplastic extrusion,
- Achieving a significant reinforcement due to the ability to keep a high Length/Diameter ratio of the dispersed wood fibre after injection





WoodForce is a significant breakthrough in injection moulding as it delivers on 3 major requirements to succeed in today's complex industrial environment:

1. WoodForce delivers superior performance
  - Superior Mechanical Properties
  - Consistent Properties
  - Enhanced Design (pigmentation possibilities)
  - Weight Reduction (focus of the automotive industry)
2. WoodForce is industrially friendly
  - Easy to use/Ready to use
  - Favourable Health & Safety Profile (dust removal)
  - Reduced Equipment Wear compared to glass fiber and minerals
3. WoodForce is environmentally fit
  - Renewable and Sustainable raw material sourcing
  - Great Carbon Footprint and great Life Cycle Analysis
  - Recyclability and Favourable End of Life Options
  - Lower energy used for conversion compared to minerals

The development of Woodforce brings significant benefits to the Forest Based Sector

- Forest products make a successful entry in new industrial applications
- WoodForce helps preserve existing MDF industrial assets (overcapacity issues);
- As a Forest product, it contributes to a more sustainable economy;
- WoodForce promotes the use of bio-plastics;
- It promotes the development of the recycled thermoplastics;
- WoodForce contributes to the growth of the Knowledge-Based Bio-Economy (KBBE)

Link to Agrobiobase



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