

Construction bio-composites materials



Description

Isolated via environmental friendly process, organic renewable compounds will be used as high-performance additives for the development of a new series of bio-composites for the construction sector.

Objectives

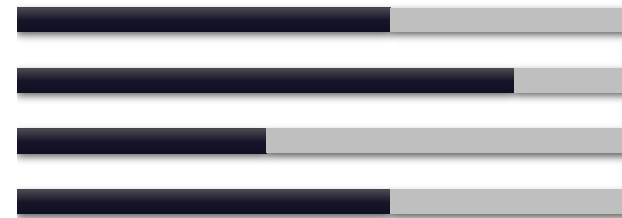
- To carry out a thorough environmental evaluation of products and technologies developed during bio-composites processes, providing quantitative information on the sustainability of the new technologies over their whole life cycle,
- To report the potential environmental impact (inferior energy usage and water needs, raw materials utilisation) derived from using agricultural derived wastes rather than current commercial materials.

Activities

- Sustainability assessment:
 - Life-Cycle Assessment LCA,
 - Life-Cycle Costing LCC.

Challenges

- Input data complex to collect
- Technical knowledge required
- Legal & legislation barriers
- Technology readiness level



Added values

- - 10% material usage,
- 50% bio-based weight in thermosetting nanocomposite,
- 95% bio-based weight in thermoplastic nanocomposite.

