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Wood-based composite made of wood waste and epoxy based ink-waste as adhesive: A cleaner production alternative

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Epoxy based Ink-waste (20; 30 or 40%)

+

Urea-formaldehyde resin

+

Pinus sp. and Teak (Tectona grandis) wood wastes

Wood-based Particleboards 45 treatments

- Low, medium and high densities;
- Physical and mechanical properties evaluated by Standard Codes;
- Statistical analysis: Analysis of Variance; Anderson-Darling test; Bartlett test;
- Scanning Electron Microscopy (SEM);
 - Mercury Intrusion Posimetry;
- Enrivonmental performance analysis via MECO (Materials; Energy; Chemical and Others) matrix.



Wood-based Particleboards

It can be concluded that it is technically feasible to produce woodbased particleboards combined with a matrix phase composed of epoxy based ink-waste adhesive.

Environmental, social and economic benefits can be observed in a Life Cycle perspective too. Therefore, it should be encouraged the use of such composite materials by the furniture industry, for instance.

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