



Investigating Heat Release Rate and Fire Growth Contribution of Cross-Laminated Timber – A Preliminary Study

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Summary:

The main objective of this preliminary study is to evaluate the heat release rate and fire growth contribution due to heat delamination characteristics of CLT manufactured with current certified ANSI/APA PRG-320 adhesives used for face bonding, when exposed to a constant radiant heat flux. The evaluation is performed using the principles of ISO 5660-1 “Reaction-to-fire tests - Heat release, smoke production and mass loss rate – Part 1: Heat release rate (cone calorimeter method)” [19]. The American version of this test method is ASTM E1354 « Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter » [20].

The long-term objective is to determine which currently accepted test methods allow for a better evaluation of heat delamination characteristics of adhesives used in structural engineered wood products, based on their actual end-use applications (e.g. bending, compression, combined stress, cross-ply, etc.)

Online Access: Free

Resource Link

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