





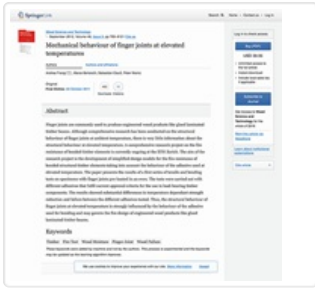
# Performance of Glue-Laminated Beams from Malaysian Dark Red Meranti Timber

<https://research.thinkwood.com/en/permalink/catalogue1822>

Author: Ong, Chee Beng  
Organization: University of Bath  
Year of Publication: 2018  
Country of Publication: United Kingdom  
Format: Thesis  
Material: Glulam (Glue-Laminated Timber)  
Application: Beams  
Topic: Mechanical Properties  
Keywords: Malaysian Dark Red Meranti (DRM)  
Production  
Phenol-Resorcinol Formaldehyde  
Fabrication  
Bonding Performance  
Carbon Fiber Reinforced Polymer  
Tension Face  
Unreinforced  
Fire Test  
Failure  
Finger Joints  
Softwood  
Europe  
Density  
End Pressure  
Cramping Pressure  
Strength  
Charring Rate  
Fire Performance  
Polyurethane  
Bending Strength  
Language: English  
Research Status: Complete  
Online Access: Free

## Resource Link

<https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.760973>



# Mechanical Behaviour of Finger Joints at Elevated Temperatures

<https://research.thinkwood.com/en/permalink/catalogue612>

Author: Frangi, Andrea  
Bertocchi, Marco  
Clauß, Sebastian  
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Publisher: Springer-Verlag

Year of Publication: 2012

Country of Publication: Germany

Format: Journal Article

Material: Glulam (Glue-Laminated Timber)

Topic: Fire  
Mechanical Properties

Keywords: Fire Resistance  
Tensile tests  
Bending Tests  
Finger Joints

Language: English

Research Status: Complete

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## Summary:

Finger joints are commonly used to produce engineered wood products like glued laminated timber beams. Although comprehensive research has been conducted on the structural behaviour of finger joints at ambient temperature, there is very little information about the structural behaviour at elevated temperature. A comprehensive research project on the fire resistance of bonded timber elements is currently ongoing at the ETH Zurich. The aim of the research project is the development of simplified design models for the fire resistance of bonded structural timber elements taking into account the behaviour of the adhesive used at elevated temperature. The paper presents the results of a first series of tensile and bending tests on specimens with finger joints pre-heated in an oven. The tests were carried out with different adhesives that fulfil current approval criteria for the use in loadbearing timber components. The results showed substantial differences in temperature dependant strength reduction and failure between the different adhesives tested. Thus, the structural behaviour of finger joints at elevated temperature is strongly influenced by the behaviour of the adhesive used for bonding and may govern the fire design of engineered wood products like glued laminated timber beams.

Online Access: Free

## Resource Link

[http://doc.rero.ch/record/310472/files/226\\_2011\\_Article\\_444.pdf](http://doc.rero.ch/record/310472/files/226_2011_Article_444.pdf)