
**Timber structures — Glued laminated
timber — Face and edge joint cleavage
test**

*Structures en bois — Bois lamellé-collé — Essai de fendage des joints
face à face et longitudinaux*



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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 19993 was prepared by Technical Committee ISO/TC 165, *Timber structures*.

Introduction

This International Standard was developed by TC 165 as a factory quality-assurance test used for structural glulam and applies to the face joints of each production batch. The frequency of testing and the pass/fail criteria are detailed in ISO 12578¹⁾. However, there is nothing in principle that prevents the test method from being applied to non-structural glulam.

Dry specimens are tested under ambient conditions and wet specimens are tested under ambient conditions after a vacuum-pressure soak.

1) To be published.

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Timber structures — Glued laminated timber — Face and edge joint cleavage test

1 Scope

This International Standard specifies methods of evaluating the effectiveness of glued, laminated timber-face and edge bonds within a manufacturing plant by cleaving of the glue line in both dry and wet conditions.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

wood failure

area of wood fibre remaining on the bond line following completion of the cleavage test expressed as a percentage of the total test area excluding any areas of wood defect (gum vein and similar)

2.2

cleavage

rupture parallel to the wood grain of a glulam face joint bond line or the adjacent adherend by the application of normal stress

3 Principle

A specimen consisting of a full cross-section of laminated timber is cleaved apart along the plane bond lines and wood failure is assessed after wet or dry conditioning.

4 Apparatus

4.1 Chisel, with a wedge angle and thickness such that the tip of the blade does not touch the bottom of the saw cut of the test specimen before cleavage failure begins to occur.

The width of the chisel shall exceed that of the specimen.

NOTE A bricklayer's bolster is a suitable implement.

4.2 Hammer or mallet, with a minimum mass 1 kg.

4.3 Wood cutting equipment, such as a panel saw, band saw or circular saw.

4.4 Autoclave or similar vessel, designed to withstand safely a pressure of at least 500 kPa, equipped with a vacuum pump capable of drawing a vacuum of at least 65 kPa (500 mm of mercury) in the vessel and a pump or other device to provide a pressure of at least 500 kPa.