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Timber structures — Glued laminated timber — Test methods for determination of physical and mechanical properties

Structures en bois — Bois lamellé-collé — Méthodes d'essai pour la détermination de certaines propriétés physiques et mécaniques

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

This third edition cancels and replaces the second edition (ISO 8375:2009), which has been technically revised.

Timber structures — Glued laminated timber — Test methods for determination of physical and mechanical properties

1 Scope

This document specifies test methods suitable for determining the following characteristic values of glued laminated timber: modulus of elasticity in bending; shear modulus; bending strength; modulus of elasticity in tension parallel to the grain; tension strength parallel to the grain; modulus of elasticity in compression parallel to the grain; compression strength parallel to the grain; modulus of elasticity in tension perpendicular to the grain; tension strength perpendicular to the grain; modulus of elasticity in compression perpendicular to the grain; compression strength perpendicular to the grain and shear strength.

In addition, the determination of dimensions, moisture content and density are specified.

This document is applicable to rectangular shapes of glued laminated timber.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at http://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
density
characteristic mean density obtained at a 75 % confidence limit with mass and volume corresponding to equilibrium moisture content at a temperature of 20 °C and a relative humidity of 65 %

Note 1 to entry: ISO 12122-1 and ISO 12122-3 provide guidelines for statistical processing of data to determine characteristic values such as density.

3.2
strength
characteristic lower 5-percentile value at a 75 % confidence limit obtained from the results of tests using test specimens at an equilibrium moisture content resulting from a temperature of 20 °C and a relative humidity of 65 % or the strength value at the observed moisture content when full size members are tested

Note 1 to entry: ISO 12122-1 and ISO 12122-3 provide guidelines for statistical processing of data to determine characteristic values such as strength.