
**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*





COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and suffixes	2
4.1 Symbols	2
4.2 Suffixes	3
5 Determination of dimensions of test specimens	3
6 Determination of moisture content of test specimens	3
7 Determination of density of test specimens	4
8 Conditioning of test specimens	4
9 Determination of local (shear-free) modulus of elasticity of the beam in bending	4
9.1 Test specimen	4
9.2 Procedure	4
9.3 Expression of results	5
10 Determination of global modulus of elasticity of the beam in bending	6
10.1 Test specimen	6
10.2 Procedure	6
10.3 Expression of results	7
11 Determination of shear modulus of the beam — Variable span method	7
11.1 General	7
11.2 Test piece	8
11.3 Procedure	8
11.4 Expression of results	9
11.4.1 Determination of K_1 and K_2	9
11.4.2 Shear modulus	9
12 Determination of bending strength of the beam	10
12.1 Test specimen	10
12.2 Procedure	10
12.3 Expression of results	11
13 Determination of the modulus of elasticity in tension parallel to the grain of the glued laminated timber	11
13.1 General	11
13.2 Test specimen	11
13.3 Procedure	11
13.4 Expression of results	12
14 Determination of the parallel to the grain tension strength of the glued laminated timber	12
14.1 Test specimen	12
14.2 Procedure	12
14.3 Expression of results	12
15 Determination of the modulus of elasticity in compression parallel to the grain of the glued laminated timber	13
15.1 General	13
15.2 Test specimen	13
15.3 Procedure	13
15.4 Expression of results	13

16	Determination of the parallel to grain compression strength of the glued laminated timber	14
16.1	Test specimen.....	14
16.2	Procedure.....	14
16.3	Expression of results.....	14
17	Determination of the modulus of elasticity in compression and tension perpendicular to the grain of the glued laminated timber	14
17.1	Requirements for test specimens.....	14
17.2	Procedure.....	15
17.3	Expression of results.....	15
	17.3.1 Compression perpendicular to the grain.....	15
	17.3.2 Tension perpendicular to the grain.....	16
18	Determination of tension and compression strengths perpendicular to the grain of the glued laminated timber	17
18.1	Requirements for test specimens.....	17
	18.1.1 Fabrication.....	17
	18.1.2 Surface preparation.....	17
18.2	Procedure.....	17
18.3	Expression of results.....	19
	18.3.1 Compression perpendicular to the grain.....	19
	18.3.2 Tension perpendicular to the grain.....	20
19	Determination of shear strength parallel to the grain — Small specimen test	20
19.1	Requirements for test specimens.....	20
	19.1.1 Fabrication.....	20
	19.1.2 Surface preparation.....	20
19.2	Procedure.....	21
19.3	Expression of results.....	22
20	Determination of shear strength parallel to the grain — Full size beam test	23
20.1	Specimen.....	23
20.2	Procedure.....	23
20.3	Expression of result.....	24
21	Test report	25
21.1	General.....	25
21.2	Test specimen.....	25
21.3	Test method.....	25
21.4	Test results.....	25
	Bibliography	26