

This is a preview of "ISO 11093-7:2011". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2011-09-15

**Paper and board — Testing of cores —
Part 7:
Determination of flexural modulus by the
three-point method**

Papier et carton — Essais des mandrins —

Partie 7: Détermination du module de flexion par la méthode à trois points



Reference number
ISO 11093-7:2011(E)

© ISO 2011

This is a preview of "ISO 11093-7:2011". [Click here to purchase the full version from the ANSI store.](#)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2011

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 11093-7:2011". [Click here to purchase the full version from the ANSI store.](#)

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Apparatus	2
5.1 Test-piece support	2
5.2 Measuring device	2
5.3 Load	3
6 Test piece	4
6.1 Sampling	4
6.2 Test-piece size	4
6.3 Conditioning	4
7 Procedure	4
7.1 General	4
7.2 Positioning of bearings and measuring device	5
7.3 Application of loading	5
7.4 Determination	5
8 Calculation of the flexural modulus	5
9 Estimation of required force	6
10 Test report	6
Bibliography	7

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 11093-7 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*.

This second edition cancels and replaces the first edition (ISO 11093-7:1997), which has been technically revised. The following amendments have been made compared with ISO 11093-7:1997:

- a) adaptation to editorial rules for International Standards;
- b) as the effect of transverse frame on deflection is so low with usual reel core measurements that it can be neglected given the usual variation in materials, the Timoshenko factor has been deleted along with the corresponding equation.

ISO 11093 consists of the following parts, under the general title *Paper and board — Testing of cores*:

- *Part 1: Sampling*
- *Part 2: Conditioning of test samples*
- *Part 3: Determination of moisture content using the oven drying method*
- *Part 4: Measurement of dimensions*
- *Part 5: Determination of characteristics of concentric rotation*
- *Part 6: Determination of bending strength by the three-point method*
- *Part 7: Determination of flexural modulus by the three-point method*
- *Part 8: Determination of natural frequency and flexural modulus by experimental modal analysis*
- *Part 9: Determination of flat crush resistance*