

## DIN ISO 11093-7



ICS 85.080.30

Supersedes  
DIN ISO 11093-7:1998-03

**Paper and board –  
Testing of cores –  
Part 7: Determination of flexural modulus by the three-point method  
(ISO 11093-7:2011),  
English translation of DIN ISO 11093-7:2012-10**

Papier und Pappe –  
Prüfung von Wickelkernen aus Hülsenkarton –  
Teil 7: Bestimmung des Elastizitätsmoduls mit dem Drei-Punkt-Verfahren  
(ISO 11093-7:2011),  
Englische Übersetzung von DIN ISO 11093-7:2012-10

Papier et carton –  
Essais des mandrins –  
Partie 7: Détermination du module de flexion par la méthode à trois points  
(ISO 11093-7:2011),  
Traduction anglaise de DIN ISO 11093-7:2012-10

Document comprises 11 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.



*A comma is used as the decimal marker.*

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## National foreword

This standard has been prepared by Technical Committee ISO/TC 6 “Paper, board and pulps” (Secretariat: SCC, Canada), Working Group WG 7 “Cores for reels of paper” (Secretariat: DIN, Germany).

The responsible German body involved in its preparation was the *Normenausschuss Papier, Pappe und Faserstoff* (Paper, Board and Pulps Standards Committee), Working Committee NA 074-01-41 AA *Zylindrische Wickelkerne aus Papier und Pappe für Flächengebilde*.

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.

DIN 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*

## Amendments

This standard differs from DIN ISO 11093-7:1998-03 as follows:

- a) the standard has been brought in line with the current rules of presentation;
- b) in the main element of the German version the term *Hülse* has been replaced by *Wickelkern* (core);
- c) 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;
- d) the text of ISO 11093-7:2011 has been adopted without any modification.

## Previous editions

DIN ISO 11093-7: 1998-03

**National Annex NA**  
(informative)

**Bibliography**

DIN ISO 11093-1, *Paper and board — Testing of cores — Part 1: Sampling*

DIN ISO 11093-2, *Paper and board — Testing of cores — Part 2: Conditioning of test samples*

DIN ISO 11093-3, *Paper and board — Testing of cores — Part 3: Determination of moisture content using the oven-dry method*

DIN ISO 11093-8, *Paper and board — Testing of cores — Part 8: Determination of natural frequency and flexural modulus by experimental modal analysis*