INTERNATIONAL STANDARD ISO 11093-1

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# Paper and board — Testing of cores —

## Part 1:
Sampling

*Papier et carton — Essais des mandrins —*

*Partie 1: Échantillonnage*

Reference number
ISO 11093-1:1994(E)

## 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.

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.

International Standard ISO 11093-1 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps,* Subcommittee SC 3, *Dimensions and grammage of paper, board and pulp products.*

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: Dimensional measurements*

— *Part 5: Determination of characteristics of concentric rotation*

— *Part 8: Machine test for dynamic cleavage*

— *Part 9: Determination of flat crush resistance*



International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland

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# Paper and board — Testing of cores —

# Part 1:
Sampling

## 1 Scope

This part of ISO 11093, based on ISO 186:1994, *Paper and board — Sampling to determine average quality*, specifies a method for obtaining a representative sample of a lot of cores for test purposes.

NOTE 1 If less than 50 % of the lot is available for sampling, then sampling will be invalid in the absence of agreement to the contrary.

## 2 Definitions

For the purposes of this part of ISO 11093, the following definitions apply.

**2.1 lot:** Aggregate of cores of a single kind possessing specified characteristics.

A lot may comprise one or more identical packaged units.

**2.2 specimen:** Complete undamaged core taken from a packaged unit.

**2.3 sample:** Aggregate of all specimens.

**2.4 test piece:** Complete core or a core section on which testing is carried out in accordance with the stipulations of the method of test.

**2.5 selected at random:** Taken in such a manner that each part of the lot has an equal chance of being selected.

## 3 Principle

A selection of cores is taken at random from packaged units taken at random from the lot. These are then subdivided and mixed so as to obtain from the specimens, the sample from which the test pieces will be taken.

## 4 Procedure

Take the specimens at random, their number as given in table 1.

**Table 1 — Number of specimens**

| Number of cores | Number of specimens |
|---|---|
| up to 99 | 5 |
| 100 to 499 | 10 |
| 500 and more | 20 |

## 5 Additional requirements

### 5.1 Precautions

Specimens and test pieces shall be protected from harmful influences, for example direct sunlight, considerable climatic fluctuations, liquids, etc.

### 5.2 Marking

Specimens and test pieces shall be provided with markings adequate to ensure that each specimen and test piece can be identified beyond all doubt. These identification markings shall be indelible. They may be limited to the number of the sampling report and the sampler's signature.

### 5.3 Re-sampling

If, as a result of an accident during sampling or testing, re-sampling is necessary, a new sample shall be taken in accordance with the aforementioned specifications. Unless otherwise specified, samples may be taken from the same packaged units as before.

If re-sampling is deemed necessary for other reasons, it shall not be made from the same packaged units.