

INTERNATIONAL  
STANDARD

**ISO**  
**536**

Second edition  
1995-09-01

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**Paper and board — Determination of  
grammage**

*Papier et carton — Détermination du grammage*



Reference number  
ISO 536:1995(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 536 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*, Subcommittee SC 2, *Test methods and quality specifications for paper and board*.

This second edition cancels and replaces the first edition (ISO 536:1976), which has been technically revised.

Annex A forms an integral part of this International Standard. Annex B is for information only.

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Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

# Paper and board — Determination of grammage

## 1 Scope

This International Standard specifies a method of determining the grammage of paper and board.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 186:1994, *Paper and board — Sampling to determine average quality.*

ISO 187:1990, *Paper, board and pulps — Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples.*

ISO 287:1985, *Paper and board — Determination of moisture content — Oven-drying method.*

## 3 Definition

For the purposes of this International Standard, the following definition applies.

**3.1 grammage:** Mass of a unit area of paper or board determined by a specific method of test.

Grammage is expressed in grams per square metre.

## 4 Principle

The area of the test pieces and their masses are determined and the grammage is calculated.

## 5 Apparatus

**5.1 Cutting device,** capable of repeatedly cleanly cutting test pieces of the same nominal size whose area falls within  $\pm 1,0\%$  of a known area. This shall be checked frequently by measurement and, provided that the above accuracy is attained, the mean area obtained in these checks shall be used for calculating grammage.

With certain types of paper and board it will be found, after carrying out this determination of area, that test pieces cannot be cut with the accuracy just defined; in such instances the area of every test piece shall be determined individually.

**5.2 Balance,** sufficiently accurate, over the range of mass for which it is used, to measure to within  $0,5\%$  of the actual mass. It shall be sensitive enough to detect a change of  $\pm 0,2\%$  in the mass to be weighed and, if the balance is of the direct-reading type, it shall be graduated so that readings may be taken to this degree of accuracy.

Special sheet-weighing balances, designed to weigh test pieces of a given size and which indicate grammage directly, may be used provided that the above conditions are fulfilled and that the area of each test piece on a single weighing is not less than  $500\text{ cm}^2$  and not more than  $1\ 000\text{ cm}^2$  (see clause 8 and 9.2).

When in use, the balance shall be shielded from air currents.

## 6 Sampling

The selection of units and sheets and the taking of specimens shall be carried out in accordance with ISO 186. The number of specimens taken (at least five) shall be sufficient for at least 20 test pieces.