

Paper and board — Determination of the static and kinetic coefficients of friction — Horizontal plane method

ICS 85.060

Confirmed April 2010

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

BSI
Documents



Document Sharing Hub

National foreword

This British Standard reproduces verbatim ISO 15359:1999 and implements it as the UK national standard.

The UK participation in its preparation was entrusted to Technical Committee PAI/11, Methods of test for paper, board and pulp, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, the ISO title page, pages ii and iii, a blank page, pages 1 to 12, an inside back cover and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

This British Standard, having been prepared under the direction of the Sector Committee for Materials and Chemicals, was published under the authority of the Standards Committee and comes into effect on 15 February 2000

© BSI 02-2000

ISBN 0 580 34222 0

Amendments issued since publication

Amd. No.	Date	Comments

**Paper and board — Determination of the
static and kinetic coefficients of friction —
Horizontal plane method**

*Papier et carton — Détermination des coefficients de frottement statique et
cinétique — Méthode du plan horizontal*



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 3.

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 15359 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*, Subcommittee SC 2, *Test methods and quality specifications for paper and board*.

Annexes A and B of this International Standard are for information only.

Introduction

This International Standard describes a procedure for the determination of the static and kinetic coefficients of friction of paper or board by the horizontal plane method.

The condition of the surfaces of a paper depends on their history. Their frictional properties are largely determined by the static and kinetic coefficients of friction which are determined, in this International Standard, by sliding one sheet of paper over another sheet of the same paper, or another surface in the horizontal plane, with a downwards vertical force applied to the upper material. The friction property relates to the horizontal force required to initiate and maintain movement between the two surfaces.

The coefficients of friction are properties of two surfaces. The values obtained for the coefficients are influenced by test conditions. The condition of the two surfaces under the conditions specified in this International Standard may or may not relate to the condition of the surfaces in a specific end-use situation. Nevertheless, the test results are useful in determining the combined properties of the surfaces tested.

The coefficients of friction of a machine-made paper can be different when measured in the machine direction, MD, or in the cross direction, CD. Often there is a difference between the two sides of the paper.

For certain papers, e.g. copy paper, only the static coefficient of friction at the first slide, i.e. the coefficient obtained without any previous sliding of the surfaces across each other, between the lower surface of one sheet of paper and the upper surface of another paper of the same kind may be of interest.

For certain other paper grades, e.g. shipping sack paper, linerboard and solid fibreboard, the coefficients of friction after a given amount of wear between the surfaces may be of interest. In this International Standard, to determine the coefficients of friction of worn surfaces, one test piece is caused to slide with respect to the other test piece three times. The force required to initiate and maintain sliding on the third slide is measured.

The intended use of the paper grade determines the sides of the papers which are to be in contact, the direction of the paper test pieces with respect to the direction of sliding and the number and type of coefficients of friction to be evaluated.

Annex A provides a list of recommended symbols to indicate the directions and positions of the surfaces tested.

Annex B provides a summary of test conditions for some common standard methods for paper products and plastics.

A bibliography follows the annexes.

