

# INTERNATIONAL STANDARD

**ISO**  
**6587**

Second edition  
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## **Paper, board and pulps — Determination of conductivity of aqueous extracts**

*Papier, carton et pâtes — Détermination de la conductivité des extraits  
aqueux*



Reference number  
ISO 6587:1992(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 6587 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*, Sub-Committee SC 2, *Test methods and quality specifications for paper and board*.

This second edition cancels and replaces the first edition (ISO 6587:1980), of which it constitutes a technical revision.

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# Paper, board and pulps — Determination of conductivity of aqueous extracts

## 1 Scope

This International Standard specifies a method for the determination of the conductivity of aqueous extracts of paper, board or pulp, these extracts having been prepared by a hot or a cold method.

The method is applicable to all kinds of paper, board and pulps, except for papers used for electrical purposes. For high purity papers used for electrical purposes, the method used should be that given in IEC 554-2.

## 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 186:1985, *Paper and board — Sampling to determine average quality*.

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

ISO 638:1978, *Pulps — Determination of dry matter content*.

ISO 7213:1981, *Pulps — Sampling for testing*.

IEC 554-2:1977, *Specification for cellulosic papers for electrical purposes — Part 2: Methods of test*.

## 3 Principle

A 2 g sample is extracted for 1 h with 100 ml of boiling or cold, distilled or deionized water. Meas-

urement of the conductivity of the extract at 25 °C by means of a conductivity meter or resistance bridge, using alternating current.

## 4 Reagents

### 4.1 Distilled or deionized water.

Distilled or deionized water shall be used throughout the test. The conductivity of the water shall not exceed 0,2 mS/m after boiling and cooling as specified in 7.2.2 (see note 2).

### NOTES

1 Usually, both distillation and deionization are required. Unless great care is exercised when distilling, and with the materials employed in the condenser and subsequent surfaces with which the condensed vapour would possibly come in contact, the distillate can fail to reach the required level of conductivity.

2 When it is not possible to obtain water of the specified purity, water with a higher conductivity may be used, but the conductivity of the water used should be stated in the test report.

### 4.2 Potassium chloride, standard solutions.

Use potassium chloride (KCl) of recognized analytical reagent grade, powdered, or fine crystals. Dry for 2 h at  $105\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$  and immediately prepare the following two solutions.

#### 4.2.1 0,01 mol/l solution.

Dissolve 0,745 5 g of the potassium chloride in water having a conductivity not greater than 0,2 mS/m, and dilute to 1 000 ml.

#### 4.2.2 0,001 mol/l solution.

Dilute 100 ml of the 0,01 mol/l solution (4.2.1) to 1 000 ml.

Store the solutions in waxed glass bottles with ground glass stoppers. The conductivity values, in