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NSAI Standards

Irish Standard
I.S. EN ISO 5270:2012

Pulps - Laboratory sheets - Determination of physical properties (ISO 5270:2012)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 5270

October 2012

ICS 85.040

Supersedes EN ISO 5270:1999

English Version

Pulps - Laboratory sheets - Determination of physical properties (ISO 5270:2012)

Pâtes - Feuilles de laboratoire - Détermination des propriétés physiques (ISO 5270:2012)

Faserstoff - Laborblätter- Bestimmung der physikalischen Eigenschaften (ISO 5270:2012)

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Ref. No. EN ISO 5270:2012: E

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Foreword

This document (EN ISO 5270:2012) has been prepared by Technical Committee ISO/TC 6 “Paper, board and pulps” in collaboration with Technical Committee CEN/TC 172 “Pulp, paper and board” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

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INTERNATIONAL STANDARD

ISO 5270

Third edition
2012-10-01

Pulps — Laboratory sheets — Determination of physical properties

Pâtes — Feuilles de laboratoire — Détermination des propriétés physiques

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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 2.

The main task of technical committees is to prepare International Standards. 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.

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ISO 5270 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*, Subcommittee SC 5, *Test methods and quality specifications for pulps*.

This third edition cancels and replaces the second edition (ISO 5270:1998), which has been technically revised. The list of relevant International Standards for paper and board, to be used for testing the physical properties of laboratory sheets, has been updated and new standards, such as ISO 1924-3 and ISO 15754, have been included. The option to determine air permeance, using the Bendtsen method (ISO 5636-3) or the Sheffield method (ISO 5636-4) has been inserted, as well as the option to measure optical properties.

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Introduction

This International Standard includes the determination of physical properties of both “low grammage” sheets and “high grammage” sheets, prepared in accordance with ISO 5269-1, ISO 5269-2 or ISO 5269-3. The oven-dry grammage of the “low grammage” sheets is (60 ± 2) g/m^2 using the conventional sheet former, as described in ISO 5269-1 and ISO 5269-3, or (75 ± 2) g/m^2 using the Rapid-Köthen sheet former, as described in ISO 5269-2 and ISO 5269-3. The oven-dry grammage of the “high grammage” sheets is 140 g/m^2, with a tolerance of 3 % using the conventional and the Rapid Köthen sheet formers, except for the z-directional tensile strength where the grammage is ≥ 90 g/m^2.

For determination of physical properties, ISO 5270 refers to the relevant International Standards for paper and board for the description and calibration of the required equipment, and for the calculation and reporting of results. This International Standard, however, specifies the procedures for testing laboratory sheets where the amount of material is limited, compared to testing of paper and board to which the relevant International Standards referred to are applicable, and for that reason there may be a discrepancy.

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Pulps — Laboratory sheets — Determination of physical properties

1 Scope

This International Standard specifies the relevant International Standards to be used for the determination of physical properties of laboratory sheets made of all kind of pulps. It is applicable to laboratory sheets prepared in accordance with ISO 5269-1, ISO 5269-2 or ISO 5269-3.

In this International Standard, it is left to the pulp producer and the pulp user to agree upon which properties are relevant to be tested. The results are, if applicable, reported in index form.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 534, *Paper and board — Determination of thickness, density and specific volume*

ISO 536, *Paper and board — Determination of grammage*

ISO 1924-2, *Paper and board — Determination of tensile properties — Part 2: Constant rate of elongation method (20 mm/min)*

ISO 1924-3, *Paper and board — Determination of tensile properties — Part 3: Constant rate of elongation method (100 mm/min)*

ISO 1974, *Paper — Determination of tearing resistance — Elmendorf method*

ISO 2493-1, *Paper and board — Determination of bending resistance — Part 1: Constant rate of deflection*

ISO 2493-2, *Paper and board — Determination of bending resistance — Part 2: Taber-type tester*

ISO 2758, *Paper — Determination of bursting strength*

ISO 5269-1, *Pulps — Preparation of laboratory sheets for physical testing — Part 1: Conventional sheet-former method*

ISO 5269-2, *Pulps — Preparation of laboratory sheets for physical testing — Part 2: Rapid-Köthen method*

ISO 5269-3, *Pulps — Preparation of laboratory sheets for physical testing — Part 3: Conventional and Rapid-Köthen sheet formers using a closed water system*

ISO 5626, *Paper — Determination of folding endurance*

ISO 5636-3, *Paper and board — Determination of air permeance (medium range) — Part 3: Bendtsen method*

ISO 5636-4, *Paper and board — Determination of air permeance (medium range) — Part 4: Sheffield method*

ISO 5636-5, *Paper and board — Determination of air permeance (medium range) — Part 5: Gurley method*

ISO 7263, *Corrugating medium — Determination of the flat crush resistance after laboratory fluting*

ISO 9895, *Paper and board — Compressive strength — Short-span test*

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