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Odtisi in tiskarske barve - Ugotavljanje odpornosti na vodo

Prints and printing inks -- Assessment of resistance to water

Impressions et encres d'imprimerie -- Évaluation de la résistance à l'eau

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INTERNATIONAL STANDARD ISO 2836

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Prints and printing inks — Assessment of resistance to water

Impressions et encres d'imprimerie — Évaluation de la résistance à l'eau

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2836 was drawn up by Technical Committee ISO/TC 130, *Graphic technology* and circulated to the Member Bodies in August 1972.

It has been approved by the Member Bodies of the following countries :

Australia	Germany	Sweden
Austria	Ireland	Switzerland
Chile	New Zealand	Thailand
Czechoslovakia	Poland	Turkey
Denmark	Romania	United Kingdom
Egypt, Arab Rep. of	South Africa, Rep. of	
France	Spain	

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Finland
Italy

Printed in Switzerland

Prints and printing inks — Assessment of resistance to water

0 INTRODUCTION

This International Standard is in technical conformity with CEI specification 03-59 of the European Committee of the Paint and Printing Ink Manufacturers' Associations.

1 SCOPE

This International Standard specifies a method of assessing the resistance to water of prints and printing inks, by giving

- the general test requirements for prints;
- the special test requirements for inks.

2 REFERENCES

ISO/R 105/I, *Tests for colour fastness of textiles — First series.*

ISO 2834, *Printing inks — Preparation of standard prints for determination of resistance to physical and chemical agents.* [1)]

3 TESTING OF PRINTS

3.1 Field of application

This International Standard applies to all printing substrates such as paper, board, metals (thin metal sheets and plate) and plastics materials, and to all printing processes: letterpress, lithographic and gravure.

3.2 Definition

A print is considered **water resistant** when, under the test conditions and provided that the substrate has undergone no change, any deterioration is only negligible and bleeding is below grade 4 of the grey scale.

3.3 Principle

A test piece is pressed between damp filter papers and then assessed as to colour change and bleeding.

3.4 Apparatus and reagent

3.4.1 Filter paper for quantitative analysis, with a very smooth non-hardened surface. The size of the strips of filter paper should be 60 mm × 90 mm.

3.4.2 Deionized water as per pharmacopoeia stipulations.

3.4.3 Glass slides, 60 mm × 90 mm.

3.4.4 Grey scale for assessment of bleeding (according to ISO/R 105/I — Part 3).

1) At present at the stage of draft.

3.5 Procedure

Place a 20 mm × 50 mm test piece between two filter papers saturated with deionized water and arrange them between two glass slides.

Place the whole (wrapped, for example, in oiled paper or enclosed in a polyethylene bag or a desiccator filled with water) in a water-vapour saturated atmosphere, beneath a 1 kg weight, at a temperature of 20 ± 2 °C, for 24 h.

Remove and separate the test piece from the filter papers and dry, for example at 40°, before attempting to assess.

3.6 Assessment of results

Examine for any deterioration of the colour of the test piece or bleeding onto the filter paper. (Bleeding is considered to have occurred if grade 4 of the grey scale is reached.)

Examine whether the ink film is completely intact and if its adhesion is maintained.

3.7 Test report

Quoting this International Standard, state whether any bleeding occurred onto the filter paper (i.e. staining of the filter paper which was in contact with the print), and if there was any deterioration of the colour of the test piece. Any changes should be described.

4 TESTING OF INKS

4.1 Definition

By the **water resistance of an ink** is meant the resistance of a standard print assessed according to the instructions given in this International Standard relating to prints.

4.2 Preparation of the standard print

Prepare the standard print according to the instructions given in ISO 2834.

4.3 Test method

Follow the instructions given in clause 3.