INTERNATIONAL STANDARD ISO 2837

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Prints and printing inks — Assessment of resistance to solvents

Impressions et encres d'imprimerie — Évaluation de la résistance aux solvants

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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 2837 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 :

Austria	India	Sweden
Czechoslovakia	Ireland	Switzerland
Egypt, Arab Rep. of	Poland	Thailand
France	Romania	Turkey
Germany	South Africa, Rep. of	United Kingdom
Hungary	Spain	

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

Finland
Italy
New Zealand

Printed in Switzerland

Prints and printing inks — Assessment of resistance to solvents

0 INTRODUCTION

This International Standard is in technical conformity with CEI specification 04-61 of the European Committee of the Paint and Printing Ink Manufacturers' Associations. It does not deal with mixtures of solvents. It is not possible to deduce the resistance of prints to varnish from the method put forward in this International Standard. For this purpose a test must be carried out with a specific varnish.

1 SCOPE

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

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

2 REFERENCE

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 or gravure.

3.2 Definition

By **resistance of a print to solvents** is meant the resistance of a print, to the solvent used for the test (3.4.2).

The print is considered to be resistant to the prescribed solvent when, under the test conditions and provided that the substrate has undergone no change, any deterioration is only negligible and no bleeding has occured.

3.3 Principle

The test pieces are immersed in the prescribed solvents for a given time. The colouring of the solvents and any change of shade of the test pieces are then established.

3.4 Apparatus and reagents

3.4.1 Test tube of thin colourless glass with inside diameter of approximately 16 mm and height approximately 160 mm.

3.4.2 Solvents to be used

3.4.2.1 Either denatured industrial ethanol

3.4.2.2 Or the following mixture :

10 % acetone by volume

10 % ethoxyethanol by volume

30 % ethyl acetate by volume

30 % denatured alcohol by volume

20 % toluene by volume

3.4.2.3 Or any other solvent provided that it is stated in the test report.

3.5 Procedure

At a temperature of 20 ± 2 °C, fill the test tube to the half-way mark with the chosen solvent and ensure that the test piece (20 mm in size) goes right to the bottom of the test tube, so that the test piece is submerged to a depth of 50 mm.

At the end of 5 min, remove the test piece and note whether the solvent has changed colour by comparing it with a standard matching tube containing the same solvent, the whole being placed in front of a white surface lit from the side by daylight. Then dry the test piece in an oven for 10 min at approximately 40 °C.

NOTE — For inks with limited solvent resistance, the duration of the test must not exceed 5 s.

1) At present at the stage of draft.