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**Graphic technology — Laboratory  
preparation of test prints —**

**Part 1:  
Paste inks**

*Technologie graphique — Préparation en laboratoire des impressions  
d'essai —*

*Partie 1: Encres compactes*



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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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 2834-1 was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

This first edition of ISO 2834-1, together with ISO 2834-2 and ISO 2834-3, cancels and replaces ISO 2834:1999. It also incorporates the Technical Corrigendum, ISO 2834:1999/Cor 1:2003. It is both a revision and an expansion of ISO 2834:1999 which only was applicable to lithographic and letterpress inks. The revised series of ISO 2834 makes provision for test print preparation for all ink types and this part of ISO 2834 covers paste inks. In addition, this part of ISO 2834 was adapted to include a larger range of commercially available ink printability testers.

ISO 2834 consists of the following parts, under the general title *Graphic technology — Laboratory preparation of test prints*:

- *Part 1: Paste inks*
- *Part 2: Liquid inks*
- *Part 3: Screen inks*

## Introduction

This part of ISO 2834 specifies the test print preparation for paste inks, i.e. lithographic and letterpress inks. These test prints have a homogeneous distribution of ink on a specified substrate and a known ink coverage and/or ink layer thickness. Therefore, they are suitable for optical tests so that the measured reflectance can be assigned to a known ink layer thickness. If test prints are prepared only for mechanical and chemical resistance tests, where the accuracy of the known ink layer thickness is different, it may be possible to apply other less accurate methods, e.g. using coaters or drawdown bars.

The methods described in this part of ISO 2834 are used in other International Standards, e.g. ISO 2846-1, ISO 2846-2 and ISO 2836.

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# Graphic technology — Laboratory preparation of test prints —

## Part 1: Paste inks

### 1 Scope

This part of ISO 2834 specifies a laboratory method for the preparation of printed samples made with paste inks (such as inks used for lithographic and letterpress printing). Such printed samples are intended to be used for reflection based measurements, such as colorimetry and reflection density as well as for testing light fastness, and the resistance of printing inks to mechanical and chemical attack regarding either printing ink and/or substrate.

### 2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 2.1

##### **printability tester**

device for uniformly inking a printing forme and transferring a known amount of ink on a substrate under specified conditions

#### 2.2

##### **printed area**

area of a substrate that is printed on, given by the surface area of the printing forme

### 3 Test method

#### 3.1 Principle

Using a printability tester, a known quantity of ink is printed uniformly on a known area of the paper or any other chosen substrate. The ink coverage is expressed in grams per square metre or, taking into account the mass density of the ink, by the ink layer thickness in micrometres.

For ease of operation, an ink pipette may be used for metering the amount of ink supplied to the inking unit. The actual amount of ink transferred to the substrate is only determined by weighing the printing forme immediately before and after printing.

Additional to printing, test samples for mechanical and chemical resistance tests may be prepared using any technique resulting in a uniform ink film in a desired thickness range, for example using a hand roller, coater or drawdown bar.