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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 38153.1-2024

Replacing GB/T 38153.1-2019

**Graphic technology - Laboratory preparation of test prints -
Part 1: Paste inks**

印刷技术 测试印样的实验室制备 第1部分：浆状油墨

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is part 1 of GB/T 38153 "Laboratory preparation of test specimens for printing technology". GB/T 38153 has been published.

The following sections.

--Part 1: Paste inks;

--Part 2: Liquid ink;

--Part 3: Screen Inks.

This document replaces GB/T 38153.1-2019 "Laboratory preparation of test specimens for printing technology Part 1: Paste inks" and Compared with GB/T 38153.1-2019, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

-- Added "Preparation of test prints (e.g. offset and letterpress printing) using a printability tester (IGT type) and a printability tester (prüfbau type)" "Test procedures for reference optical density and reference ink film thickness" "Use of current model printability tester" Methods of use" (see Chapter 1);

-- Added "running-in" (see 3.1), "inking device" (see 3.3), "ink system" (see 3.4), "liner" (see 3.5), and "printing roller" (see 3.7), "reference material" (see 3.8), "rubber" (see 3.9), "substrate carrier" (see 3.11), "ink distribution roller" (see 3.12) terms and definitions;

--Changed the description of the "Instrument" chapter (see Chapter 4, 3.2 of the 2019 edition);

--Changed the description of the "Principles" chapter (see Chapter 5, 3.1 of the 2019 edition);

--Added a chapter on "Preparation" (see Chapter 6);

--Changed the description of the "Steps" chapter (see Chapter 7, Chapter 4 of the 2019 edition);

--Added a chapter on "Evaluation" (see Chapter 8);

-- Changed the description of the "Report" chapter (see Chapter 9, Chapter 5 of the 2019 edition);

-- The appendix "Requirements for the Preparation of Test Prints for Printability Testers" (see Appendix A of the 2019 edition) was deleted;

--Added the appendixes "Run-in of elastic rubber rollers" (see Appendix B) and "Maintenance of elastic rollers and other materials" (see Appendix C).

This document is equivalent to ISO 2834-1:2020 "Laboratory preparation of test specimens for printing technology - Part 1: Paste inks".

Introduction

In order to establish and improve the standard system of laboratory preparation methods for test samples, so as to ensure the repeatability of laboratory sample preparation and the credibility of data GB/T 38153 "Laboratory Preparation of Printing Technology Test Samples" was formulated.

It consists of 3 parts.

--Part 1: Paste ink. The purpose is to standardize the level of laboratory preparation of paste ink prints to ensure the color difference and reflection density measurement the test repeatability is good, which improves the credibility of the test results of the printed sample performance.

-- Part 2: Liquid inks. The purpose is to standardize the level of liquid ink prints prepared in the laboratory to prevent the occurrence of errors in images and test results.

The influence of the change of the process on the test results and specimen performance.

-- Part 3: Screen ink. The purpose is to evaluate the optical properties of screen ink such as transparency and reflection density through optical testing.

There are also unified standard specifications for the gloss, light resistance, and chemical, physical and mechanical resistance of ink prints.

This document is part 1 of GB/T 38153 and describes the preparation of laboratory test specimens for paste inks.

The method is used in other international standards such as ISO 2846-1, ISO 2846-2 and ISO 2836 and will become part of the International Organization for Standardization/Paper, Board and Several technical committees on pulp (ISO/TC 6/SC 2) and printing (ISO/TC 130) have jointly developed the basis for a printability standard.

This document describes the use of the IGT and prüfbau printability testers for printing on paper, cardboard, metal, aluminum foil and other suitable substrates.

The steps taken when preparing printed products are mainly to measure the reference optical density of the substrate and the reference ink density in g/m².

Other types of inks, such as liquid inks for gravure or flexographic printing as specified in ISO 2834-2 and liquid inks for silk screen printing as specified in ISO 2834-3 Screen printing inks, similar to this document.

In this method, a step is added to perform periodic tests with reference materials to check the aging of the materials used (such as rubber and ink) Condition.

Laboratory preparation of test prints for printing technology Part 1: Paste Ink

1 Scope

This document describes the printing performance of paste inks on paper, board, metal, foil and other suitable substrates using a printability tester (IGT type).

Test procedure for preparing test samples (e.g. for offset and letterpress printing) using a printability tester (Prüfbau type).

This document describes the test procedures for reference optical density and reference ink film thickness.