



Designation: D7680 – 10 (Reapproved 2019)

Standard Practice for Preparing Prints of Paste Printing Inks by a Motor-Driven Printability Tester¹

This standard is issued under the fixed designation D7680; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice describes the procedure for preparing laboratory prints of paste printing inks using a motor-driven printability tester.

1.2 This practice covers printability testers of four different designs, referred to as Tester A, B, C, and D. These testers feature “push-button” control of printing speed and pressure and facilitate measurement of exact ink film thickness.

1.3 This practice is intended primarily for lithographic and letterpress inks that dry by oxidation or penetration. With appropriate drying or curing equipment, it is also applicable to other systems such as heat-set or energy curable.

1.4 This practice is applicable to the preparation of single-color solid-area prints by dry offset (also known as letterpress) or by letterpress on any flat surface including paper, paperboard, plastic film, textiles, and metal.

1.5 The values stated in SI units are to be regarded as the standard. The only other unit of measurement used is fpm.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This practice is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.56 on Printing Inks.

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2. Referenced Documents

2.1 ASTM Standards:²

D528 Test Method for Machine Direction of Paper and Paperboard (Withdrawn 2010)³

D1475 Test Method for Density of Liquid Coatings, Inks, and Related Products

D5039 Test Methods for Identification of Wire Side of Paper (Withdrawn 2009)³

D6073 Test Method for Relative Setting of Heatset Printing Inks

D7189 Test Method for Relative Mileage of News Ink on Newsprint

D7305 Test Method for Reflection Density of Printed Matter

2.2 Other Standards:⁴

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

ISO/DIS 2835–1 Graphic technology—Laboratory preparation test prints—Part 1: Paste inks

ISO 2846–1 Graphic technology—Specification for color and transparency of printing ink sets—Part 1: Inks for heat-set web offset lithographic printing

ISO 2846–2 Graphic technology—Specification for color and transparency of printing ink sets—Part 2: Inks for coldset offset lithographic printing

3. Terminology

3.1 Symbols:

fpm = feet per minute
(fpm ÷ 200 = m/s)

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.