



Standard Test Method for Assessing the Color Strength and Dispersibility of Alkali Blue Pigment in Hot Melt Carbon Copy Paper Ink¹

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1. Scope

1.1 This test method provides a procedure to determine the color strength of dry or flushed alkali blue pigment in hot melt carbon copy paper ink compared to an alkali blue control mutually agreed upon by the purchaser and supplier.

1.2 *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 and health practices and determine the applicability of regulatory limitations prior to use.* Specific warning statements are given in 9.1 and 9.2.1.

2. Referenced Documents

2.1 ASTM Standards:

D 1210 Test Method for Fineness of Dispersion of Pigment-Vehicle Systems²

D 3460 Specification for White Watermarked and Unwatermarked Bond, Mimeograph, Duplicator, and Xerographic Cut-Sized Office Papers³

F 129 Test Method for Amount of Ink Deposit on Carbon Paper and Inked Ribbons, Other Than Fabric Type³

F 149 Terminology Relating to Optical Character Recognition³

F 221 Terminology Relating to Carbon Paper and Inked Ribbon Products and Images Made Therefrom³

F 497 Practice for the Use of the Electric and Electronic Typewriter as a Test Instrument³

F 597 Practice for the Evaluation of One-Time Carbon Paper in Carbon-Interleaved Business Forms by Use of an Electric Typewriter³

2.2 ANSI Standards:⁴

PH2.17 Density Measurements—Geometric Conditions for Reflection Density

PH2.18 Density Measurements—Spectral Conditions

3. Terminology

3.1 Definitions:

3.1.1 *steel scraper, n*—also referred to as a drawdown knife (see Fig. 1).

3.1.2 *drawdown, n*—a film of ink deposited on paper by a smooth edged blade to evaluate the characteristics of the ink (see Fig. 2).

4. Summary of Test Method

4.1 Samples of the control and the test material(s) are dispersed in a hot melt carbon paper ink, utilizing a laboratory batch-type heated shot mill apparatus or a heated ball mill. Resultant inks produced are compared by making drawdowns on grease proof translucent paper or by coating on carbonizing tissue in a proper and reasonable coating weight range. These are evaluated visually, with a densitometer or by use of the electric typewriter as a test instrument.

5. Significance and Use

5.1 This test method is intended to provide a means of evaluating the comparative color strength and dispersibility of alkali blue dry pigment or flushed color in hot melt carbon paper inks.

6. Interferences

6.1 Temperature limits must be maintained during dispersion and test sample preparation for reproducibility of test results.

6.2 Dispersion time must be carefully timed to a dispersion level agreed upon between supplier and consumer. For guidance, the following grind levels on the fineness of grind gage may be considered sufficient:

Grind Level	Gage Scale
5.5 to 6.0	Hegman (North Standard)
7.0 to 8.0	Production Club (PC)
1.25 to 0.75	Mils (0.001 in.)
32.0 to 25.0	Micrometres
12.5 to 7.5	NPIRI (2 mil gage)

¹ This test method is under the jurisdiction of ASTM Committee F05 on Business Imaging Products and is the direct responsibility of Subcommittee F05.02 on Inked-Transfer Imaging Products.

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² *Annual Book of ASTM Standards*, Vol 06.01.

³ *Annual Book of ASTM Standards*, Vol 15.09.

⁴ Available from American National Standards Institute, 25 W. 43rd St., 4th Fl., New York, NY 10036.