



Standard Practice for Evaluation of Image Quality Produced by a Carbonless Copy Paper with an Electric or Electronic Typewriter¹

This standard is issued under the fixed designation F 686; 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 covers a method for the visual evaluation of the image quality formed by a carbonless copy paper in a business form when imaged with an electric or electronic typewriter.

NOTE 1—Electric or electronic typewriters covered by this procedure have a full-character type element. Examples of such elements are type bar, ball, and daisy wheel.

1.2 The evaluation is made by comparison of the sample carbonless copy to a control.

1.3 *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.*

2. Referenced Documents

2.1 ASTM Standards:

D 585 Practice for Sampling and Accepting a Single Lot of Paper, Paperboard, Fiberboard, and Related Products²

D 685 Practice for Conditioning Paper and Paper Products for Testing²

F 221 Terminology Relating to Carbon Paper and Inked Ribbon Products and Images Made Therefrom²

F 497 Practice for Use of the Electric and Electronic Typewriter as a Test Instrument²

F 549 Terminology Relating to Carbonless Copy Products²

3. Terminology

3.1 *Definitions*—For definitions relating to carbonless copy paper, see Terminologies F 221 and F 549.

4. Summary of Practice

4.1 A sample carbonless copy paper is positioned alongside a control carbonless copy paper with known image quality in a business form and imaged on an electric or electronic typewriter at a designated setting and pressure. A visual comparison is made of the typed images from both the sample and the control carbonless copy paper.

5.1 This practice is used primarily to evaluate the image quality produced on an electric or electronic typewriter of a carbonless copy paper by comparison with a control carbonless copy paper with known performance qualities in a business form of a predetermined composition.

5. Significance and Use

5.2 This practice can be used for the selection of a carbonless copy paper where no control is available.

5.3 This practice can be used to evaluate carbonless copy paper business forms by comparison to similar control form with known performance qualities.

5.4 This practice can be used to determine which surface (Coated Back (CB) or Coated Front (CF)) of a carbonless copy paper in a business form that has an unsatisfactory performance is defective by replacing each surface one at a time with control CB or CF surfaces with known satisfactory performance.

5.5 This practice can be used for production, quality control, and research and development.

6.1 Pressure settings, durometer of platens, and typewriter will affect the image quality.

6. Interferences

6.2 Weight, thickness, color, and finish of the carbonless copy paper or of the form as well as the number of parts in the form will affect the image quality.

6.3 Fluctuations of temperature and humidity will affect the image quality. Tests run on different days can show variation in the image quality. All tests should be dated with the temperature and relative humidity recorded.

6.4 Image density development does vary with time. All comparisons should be made with the same development time for the carbonless image.

6.5 Carbonless copy papers from different manufacturers may not be compatible and must not be intermixed in the sample form used in the comparison tests.

6.6 Differences in image color and shade will affect the evaluation of the image quality.

¹ This practice is under the jurisdiction of ASTM Committee F5 on Business Copy Products and is the direct responsibility of Subcommittee F05.06 on Carbonless Copy Paper.

Current edition approved April 15, 1994. Published June 1994. Originally published as F 686 – 80. Last previous edition F 686 – 85 (1989)ε¹.

² *Annual Book of ASTM Standards*, Vol 15.09.