



Standard Practice for Evaluation of One-Time Carbon Paper in Carbon-Interleaved Business Forms by Use of an Electric Typewriter¹

This standard is issued under the fixed designation F 597; 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 standardized procedure using an electric typewriter to determine the image quality of one-time carbon paper for use in carbon-interleaved business forms.

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.*

2. Referenced Documents

2.1 ASTM Standards:

D 585 Practice for Sampling and Accepting a Single Lot of Paper, Paperboard, Fiberboard, and Related Product²

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

3. Terminology Definitions

3.1 Refer to Terminology F 221.

4. Summary of Practice

4.1 This practice consists of a comparison test under actual use conditions whereby a sample of one-time carbon paper is interleaved side by side with a control carbon of known image quality into a business form (or with forms bond paper to simulate a business form) and imaged on an electric typewriter at a designated setting and pressure. A visual comparison is made of the typed images from both sample and control carbon.

4.2 This practice is used primarily to determine whether or not a one-time carbon will produce a satisfactory image in a business form of predetermined composition with a quality similar to that of the control carbon.

5. Significance and Use

5.1 This practice is used primarily to evaluate the image quality of a one-time carbon paper by comparison with a control carbon of known performance in a business form of predetermined composition on an electric typewriter.

5.2 This practice can also be used for the selection of a one-time carbon for a particular business form where a control carbon does not exist.

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

6. Interferences

6.1 Different pressures and settings on the same typewriter can affect the carbon-image quality.

6.2 Platens of different durometer in the same typewriter can affect the carbon-image quality.

6.3 Different typewriters can affect the carbon-image quality.

6.4 The length of time, the pressure, and the temperature during which the carbons are interleaved in the form can affect the carbon-image quality.

6.5 The length of time that the carbon paper was originally coated and the storage conditions during that period can affect the image quality.

6.6 Weight, thickness, and finish of form bond paper can affect image quality.

6.7 Basis Weight of carbon substrate and carbon ink hardness, coat weight or thickness, can affect image quality.

6.8 Typewriter platen misalignment could produce lighter images on the left of the form than on the right or reverse.

6.8.1 To check the platen make write with control carbons, remove carbons, cut vertically, replace in form in the same order, but reverse the left and right positions of each carbon sheet. Repeat exactly the same write and examine carbon copy for evidence of variation.

7. Apparatus

7.1 *Commercial Electric Typewriter*, see Practice F 497.

¹ This practice 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.

Current edition approved Oct. 28, 1983. Published December 1983. Originally published as F 597 – 78. Last previous edition F 597 – 78.

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