



Standard Test Method for Cleanliness of Carbon Paper¹

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1. Scope

1.1 This test method describes a typewriter test that compares the cleanliness properties of carbon papers (one-time or multiple use) and is based on resistance to feed roll marking the smear of carbon images.

1.2 This test method also describes how to compare the cleanliness properties of the backs of carbon papers.

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:*

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

3. Terminology

3.1 *Definitions:*

3.1.1 *back cleanliness*—the freedom of ink on the back of the carbon sheet.

3.1.2 *feed roll cleanliness*—the resistance to transfer of ink to the copy sheet from the pressure of feed rolls.

3.1.3 *smear freedom*—the freedom from tailing of the copy image when the carbon is pulled from forms.

3.1.4 *tailing*—the streak-type marks appearing on carbon images on the copy papers.

3.1.4.1 *Discussion*—Less tailing would be noted with cleaner carbons.

4. Summary of Test Method

4.1 The comparative typewriter test involves using the carbon papers in a prescribed set of forms and observing the results.

4.2 The cleanliness of the backs of carbon papers involves rubbing them with clean sheets of bond-type papers and observing and comparing the amount of ink transfer.

5. Significance and Use

5.1 This test method can be used in new applications evaluations, product development, and specification acceptance procedures.

6. Interferences

6.1 Variation in platen roll durometer.

6.2 Variation in feed roll durometer.

6.3 Variation in feed roll pressure.

6.4 Different operators.

6.5 Different typewriters.

6.6 Different pressures or touch by the same or different operators.

7. Apparatus

7.1 *Typewriter*, on which the carbon paper being evaluated would be normally used.

8. Sampling

8.1 Carbon paper representing homogeneous lots or batches should have samples taken from at least two different areas. Do not use the top or bottom sheet from any stock of carbon paper as a sample.

9. Procedure

9.1 *Typewriter Test:*

9.1.1 Assemble a five-part form using papers measuring 8.50 by 11.00 in. (215.9 by 279.4 mm). Use a 15-lb (17 by 22-in.; 500 sheets) (56.4 g/m²) as the top part. Below the top part, use four parts of 12-lb (17 by 22-in.; 500 sheets) (45.1 g/m²). Staple the left and right corners approximately ½ in. from the top.

9.1.2 Interleave four sheets of the test carbons measuring 8.5 by 11.00 in. (215.9 by 279.4 mm) into the five-part form so that the carbon papers extend below the bottom of the set by ½ in.

NOTE 1—Always handle form and carbon paper at the edge with care to avoid unintentional coating transfer.

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 15.09.