



Standard Specification for Copies from Office Copying Machines for Permanent Records¹

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1. Scope

1.1 This specification covers copies from office copying machines where the copied material is expected to have maximum or substantial life expectancy.

1.2 This specification is divided into two parts, paper and imaged copy. The parts appear as follows:

Part 1—Paper, Sections 6-16

Part 2—Imaged Copy, Sections 17-22

1.3 Part 1 describes the procurement process for obtaining paper that will have the proper life expectancy for the intended purpose.

1.4 Part 2 describes a procedure for estimating the durability of the image on copy from an office copying machine.

1.5 As indicated in Appendix X1.4 and X1.5, this specification may be used as a guide.

2. Referenced Documents

2.1 ASTM Standards:²

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

D 1030 Test Method for Fiber Analysis of Paper and Paperboard

D 1968 Terminology Relating to Paper and Paper Products

D 3424 Test Methods for Evaluating the Relative Lightfastness and Weatherability of Printed Matter

D 4714 Test Method for Determination of Effect of Moist Heat (50 % Relative Humidity and 90°C) on Properties of Paper and Board

D 4988 Test Method for Determination of Alkalinity of Paper as Calcium Carbonate (Alkaline Reserve of Paper)

D 5625 Test Method for Measuring Length, Width, and Squareness of Sheeted Paper and Paper Products

D 5634 Guide for Selection of Permanent and Durable Offset and Book Papers

F 1319 Test Method for Determination of Abrasion and Smudge Resistance of Images Produced from Business Copy Products (Crockmeter Method)

2.2 TAPPI Standards:

T 236 Kappa Number of Pulp³

T 400 Sampling a Single Lot of Paper, Paperboard, Fiberboard, or Related Products³

T 401 Fiber Analysis of Paper and Paperboard³

T 410 Grammage of Paper and Paperboard (Weight Per Unit Area)³

T 411 Thickness (Caliper) of Paper and Paperboard³

T 412 Moisture in Paper³

T 414 Internal Tearing Resistance of Paper³

T 425 Opacity of Paper (15 %/Diffuse Illuminant A, 89 % Reflectance Backing and Paper Backing)³

T 452 Brightness of Pulp, Paper and Paperboard (Directional Reflectance at 457 nm)³

T 509 Hydrogen Ion Concentration (pH) of Paper Extracts—Cold Extraction Method³

T 511 Folding Endurance of Paper (MIT Tester)³

T 544 Effect of Moist Heat on Properties of Paper and Board³

2.3 ISO Standard:

ISO 9706 Paper for Documents—Specifications for Permanence—Normative Annex—Special instructions for determining kappa number⁴

3. Terminology

3.1 *Definitions*—Terms used in this specification are defined in accordance with Terminology D 1968.⁵

3.1.1 *acid-sized paper, n*—paper that has been manufactured using a procedure or process at pH values below 7 (usually 4.0 to 6.5) that results in paper that has resistance to water penetration.

3.1.2 *alkaline-filled paper, n*—a paper containing an alkaline filler, such as calcium carbonate, having a pH value above 7 (extract pH usually in the range from 7.5 to 10.0), and

¹ This specification is under the jurisdiction of ASTM Committee D06 on Paper and Paper Products and is the direct responsibility of Subcommittee D06.92 on Test Methods.

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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 Available from the Technical Association of the Pulp and Paper Industry, 15 Technology Parkway South, Norcross, GA 30092.

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

⁵ See also *Dictionary of Paper*, Tappi Press.