



Designation: D1968 – 22

Standard Terminology Relating to Paper and Paper Products¹

This standard is issued under the fixed designation D1968; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 The terms in this standard are related to paper and paper products.

1.2 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

D528 Test Method for Machine Direction of Paper and Paperboard (Withdrawn 2010)³

D548 Test Method for Water-Soluble Acidity or Alkalinity of Paper (Withdrawn 2009)³

D585 Practice for Sampling and Accepting a Single Lot of Paper, Paperboard, Fiberboard, and Related Product (Withdrawn 2010)³

D586 Test Method for Ash and Organic Matter Content of Degradable Erosion Control Products

D589 Test Method for Opacity of Paper (15° Diffuse Illuminant A, 89 % Reflectance Backing and Paper Backing) (Withdrawn 2010)³

D643 Test Method for Folding Endurance of Paper by the Schopper Tester (Withdrawn 2010)³

D645/D645M Test Method for Thickness of Paper and Paperboard (Withdrawn 2010)³

D646 Test Method for Mass Per Unit Area of Paper and Paperboard of Aramid Papers (Basis Weight) (Withdrawn 2022)³

D685 Practice for Conditioning Paper and Paper Products for Testing

D727 Test Method for Kerosine Number of Roofing and Flooring Felt by the Vacuum Method

D774/D774M Test Method for Bursting Strength of Paper (Withdrawn 2010)³

D778 Test Methods for Hydrogen Ion Concentration (pH) of Paper Extracts (Hot-Extraction and Cold-Extraction Procedures) (Withdrawn 2010)³

D828 Test Method for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus

D829 Test Methods for Wet Tensile Breaking Strength of Paper and Paper Products (Withdrawn 2009)³

D918 Test Method for Blocking Resistance of Paper and Paperboard (Withdrawn 2011)³

D919 Test Method for Copper Number of Paper and Paperboard (Withdrawn 2009)³

D984 Test Methods for Reducible Sulfur in Paper (Withdrawn 2010)³

D985 Test Method for Brightness of Pulp, Paper, and Paperboard (Directional Reflectance at 457 nm) (Withdrawn 2010)³

D996 Terminology of Packaging and Distribution Environments

D2019 Test Method for Dirt in Paper and Paperboard (Withdrawn 2010)³

D2175 Test Method for Book Bulk and Book Bulking Number of Paper (Withdrawn 2010)³

D2176 Test Method for Folding Endurance of Paper and Plastics Film by the M.I.T. Tester

D2482 Test Method for Surface Strength of Paper (Wax Pick Method) (Withdrawn 2010)³

D3208 Specification for Manifold Papers for Permanent Records (Withdrawn 2010)³

D3290 Specification for Bond and Ledger Papers for Permanent Records (Withdrawn 2010)³

D3301 Specification for File Folders for Storage of Permanent Records (Withdrawn 2010)³

D3453 Specification for Flexible Cellular Materials—Urethane for Furniture and Automotive Cushioning, Bedding, and Similar Applications

D3458 Specification for Copies from Office Copying Machines for Permanent Records (Withdrawn 2010)³

¹ This terminology is under the jurisdiction of ASTM Committee D10 on Packaging and is the direct responsibility of Subcommittee D10.27 on Fiberboard Shipping Containers, Containerboard and Related Structures and Materials.

Current edition approved April 15, 2022. Published May 2022. Originally approved in 1990. Last previous edition approved in 2019 as D1968 – 19. DOI: 10.1520/D1968-22.

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 The last approved version of this historical standard is referenced on www.astm.org.

*A Summary of Changes section appears at the end of this standard

- D4431 Specification for Paper Towels for Industrial and Institutional Use (Withdrawn 2000)³
- D4332 Practice for Conditioning Containers, Packages, or Packaging Components for Testing
- D4727 Specification for Corrugated and Solid Fiberboard Sheet Stock (Container Grade) and Cut Shapes
- D4917 Test Method for Coefficient of Static and Kinetic Friction of Uncoated Writing and Printing Paper by Use of the Horizontal Plane Method (Withdrawn 2010)³
- D4918 Test Method for Coefficient of Static Friction of Uncoated Writing and Printing Paper by Use of the Inclined Plane Method (Withdrawn 2010)³
- D4949 Test Method for Determination of D-C Resistivity of Writing Paper (Keithley Method) (Withdrawn 2011)³
- D4987 Test Method for Tensile Breaking Strength of Perforations in One-Part Continuous Forms Paper (Withdrawn 2010)³
- D5039 Test Methods for Identification of Wire Side of Paper (Withdrawn 2009)³
- D5342 Test Method for Resistance to Bending of Paper and Paperboard (Taber-Type Tester in Basic Configuration) (Withdrawn 2010)³
- D5625 Test Method for Measuring Length, Width, and Squareness of Sheeted Paper and Paper Products (Withdrawn 2009)³
- D5626 Test Methods for U.S. Postal Service Optical Measurements for Small Areas (Withdrawn 2011)³
- D5634 Guide for Selection of Permanent and Durable Offset and Book Papers (Withdrawn 2010)³
- D5650 Test Method for Resistance to Bending of Paper of Low Bending Stiffness (Taber-Type Tester in 0 to 10 Taber Stiffness Unit Configuration) (Withdrawn 2010)³
- D5663 Guide for Validating Recycled Content in Packaging Paper and Paperboard
- D5725 Test Method for Surface Wettability and Absorbency of Sheeted Materials Using an Automated Contact Angle Tester (Withdrawn 2010)³
- D5803 Test Method for Tensile Strength at Zero-Span (“Wet Zero-Span Tensile”) (Withdrawn 2009)³
- D5804 Test Methods for Zero-Span Tensile Strength (“Dry Zero-Span Tensile”) (Withdrawn 2009)³
- D6043 Guide for Selection of Permanent and Durable Artist’s Paper (Withdrawn 2010)³
- D8410 Specification for Evaluation of Cellulosic-Fiber-Based Packaging Materials and Products for Compostability in Municipal or Industrial Aerobic Composting Facilities

3. Terminology

3.1 Definitions:

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 aqueous liquid penetration. See **sizing**. **D3208, D3290, D3301, D3458, D5634, D6043**

additives, *n*—functional additives are chemicals or materials that are added to paper to impart or enhance properties of the paper; process additives are used to improve operations or the runnability of the paper machine.

DISCUSSION—Functional additives may include starch, dry strength additives, wet strength resins, sizing, fillers, brightening chemicals, etc. Process additives may include drainage aides, enzymes, chelating agents, slime and bacteria control, etc.

alkaline-filled paper, *n*—a paper containing an alkaline filler such as calcium carbonate; having a pH value in excess of 7 (extract pH usually in the range from 7.5 to 10.0), and containing a reserve buffering capacity that can neutralize acidic materials formed in the paper or acidic gases sorbed from the atmosphere. **D3208, D3290, D3301, D3458, D5634, D6043**

alkaline reserve, *n*—the level, expressed as moles per kilogram or percent by weight of paper, of alkaline materials (such as calcium carbonate) capable of neutralizing either acidic degradation products formed in paper during its use and storage, or acidic gases sorbed by the paper from the atmosphere.

alkaline-sized paper, *n*—paper that has been manufactured using a procedure or process at a pH value above 7 (usually 7.5 to 10.0) that results in paper that has resistance to aqueous liquid penetration. See **sizing**. **D3208, D3290, D3301, D3458, D5634, D6043**

ash, *n*—*in wood, pulp, or paper*; *general term*, the residue after the ignition of a specimen of wood, pulp, or paper at a specified temperature for a specified time so as to remove combustible and volatile components. **D586**

base paper, *n*—the fiber network existent prior to the application of any material onto the surface of that fiber network. **D3208, D3290, D3301, D3458**

DISCUSSION—An example is paper, internally sized, in preparation for a coating or surface sizing operation.

basis weight, *n*—weight of paperboard per unit area expressed in terms of pounds per 1000 square feet (lb/1000 ft²) or as grammage in grams per square meter (g/m²).

bending moment, *n*—*of paper*, the work (force multiplied by the distance over which it is applied) required to deflect the test piece under specified conditions. **D5342, D5650**

bleached, *adj*—having been subjected to the process of bleaching. **D3301, D3453, D5634, D6043, D3208, D3290**

bleaching, *n*—a process involving a chemical or biological treatment of pulp, primarily to increase whiteness and brightness; such a process may alter or remove noncellulosic materials, such as but not limited to lignin, resin, and colorants.

blocking, *n*—*of paper or paperboard*, undesired cohesion or adhesion that interferes with the satisfactory and efficient use of the material. **D918**