



Designation: D 918 – 99

An American National Standard
Technical Association of Pulp and Paper Industry
Standard Method T 477 m-47

Standard Test Method for Blocking Resistance of Paper and Paperboard¹

This standard is issued under the fixed designation D 918; 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 test method covers the determination of the blocking resistance of flexible types of packaging materials, including paper, and the impregnated, coated or laminated, or coated and laminated, combinations of paper with metallic foils and synthetic films that may be produced therefrom, but is applicable to papers in general, whenever a tendency to block is important. The test method provides a range of standard conditions of temperature and relative humidity at constant pressure for a specified time which is designed to simulate varying climatic conditions that may be encountered in the manufacture, storage, transportation, or use of the materials.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values in parentheses are for information only.

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
- D 1968 Terminology Relating to Paper and Paper Products²

3. Terminology

3.1 **Definitions:** Definitions shall be in accordance with Terminology D 1968 and the Dictionary of Paper.³

4. Apparatus

4.1 **Oven**—A constant-temperature oven that can be maintained at selected temperatures between 100 and 140°F (38 and 67°C) within $\pm 2^\circ\text{F}$ (1°C).

4.2 **Desiccator**—A desiccator, for use as humidity chamber, having a minimum diameter of 6 in. (152 mm). Ground-glass edges should be perfect, clean, and freshly lubricated with stopcock grease. A vacuum type is preferred with pressure-relieving stopcock in the cover.

4.3 **Bedplates**—Four 4 by 4-in. (102 by 102 mm) pieces of plate glass or corrosion-resistant metal having flat upper surfaces.

4.4 **Pressure Blocks**—Four blocks having permanently plane rectangular bottom surfaces 1.25 by 1.75 in. (32 by 44 mm). Each pressure block shall weigh, or be loaded to weigh, 17.5 ± 0.2 oz (496 ± 6 g) to yield a pressure of 0.5 psi (3.4 kPa) on the underlying specimens. A brass block in the form of a rectangular parallelepiped 1.25 in. in width by 1.75 in. in length by 1.625 in. (41.27 mm) in height will meet the requirements without loading.

4.5 **Interleaving Material**—Interleaving material of white bond paper or metal foil.

5. Sampling

5.1 The material shall be sampled in accordance with Practice D 585.

6. Test Specimens

6.1 Eight test specimens 1.25 by 1.75 in. (32 by 44 mm) shall be cut from each sample for each set of test conditions used. The specimens shall be cut from the sample in such a way as to be representative.

7. Conditioning

7.1 The specimens shall be conditioned before testing in accordance with Practice D 685.

8. Test Conditions

8.1 One or more of the sets of conditions given in Table 1 shall be used. Selection of the proper conditions will depend upon the type of material tested and the actual conditions that

¹ This test method is under the jurisdiction of ASTM Committee D-6 on Paper and Paper Products and is the direct responsibility of Subcommittee D06.92 on Test Methods.

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

³ Available from the Technical Association of the Pulp and Paper Industry, Box 105113, Atlanta, GA 30348.