



Standard Specification for Paper Used for Vacuum Cleaner Filter Bags¹

This standard is issued under the fixed designation F430; 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 specification covers procedures to be followed for qualifying papers to be used in the manufacture of vacuum cleaner bags and filters. The filtration efficiency of the paper is not evaluated with the use of these test methods.

1.2 The procedures appear in the following sections:

Procedure	Sections
Air Permeability (Test Method D737)	3-5
Basis Weight (Test Method D646)	6-8
Bursting Strength (Mullen Test) (Test Method D774/D774M)	9-11
Internal Tearing Resistance (Test Method D689)	12-14
Tensile Breaking Strength (Test Method D828)	15-17

1.3 The values stated in inch-pound units are to be regarded as the standard.

1.4 *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*:²
- [D646 Test Method for Grammage of Paper and Paperboard \(Mass Per Unit Area\)](#) (Withdrawn 2010)³
 - [D689 Test Method for Internal Tearing Resistance of Paper](#) (Withdrawn 2009)³
 - [D737 Test Method for Air Permeability of Textile Fabrics](#)
 - [D774/D774M Test Method for Bursting Strength of Paper](#) (Withdrawn 2010)³
 - [D828 Test Method for Tensile Properties of Paper and](#)

[Paperboard Using Constant-Rate-of-Elongation Apparatus](#) (Withdrawn 2009)³

2.2 *TAPPI Standards*:⁴

- [T 403 Bursting Strength of Paper](#)
- [T 404 Tensile Breaking Strength of Paper and Paperboard](#)
- [T 410 Basis Weight of Paper and Paperboard](#)
- [T 414 Internal Tearing Resistance of Paper](#)

AIR PERMEABILITY

3. Scope

3.1 This test method covers the direct determination of the air permeability of vacuum cleaner bag filter media by the calibrated orifice method.

4. Significance and Use

4.1 Air permeability is an important factor in the performance of vacuum cleaner bag filter media, because it is a direct indicator of the resistance to air flow. It may also indicate the size of vacuum cleaner bag needed to achieve the desired air flow volume.

4.2 Performance specifications, both industrial and military, have been set up on the basis of air permeability and are used in the purchase of materials where permeability is of interest.

4.3 Since air permeability is not a linear function of pressure differential between paper surfaces, all tests should be made at a prescribed pressure differential, 0.5 in. (12.7 mm) of water.

5. Procedure

5.1 Determine the air permeability of the paper in accordance with Test Method [D737](#).

BASIS WEIGHT

6. Scope

6.1 This test method covers the determination of the basis weight of paper used in the manufacture of vacuum cleaner bags.

7. Significance and Use

7.1 The basis weight is a measure of the substance of the paper.

⁴ Available from the Technical Association of the Pulp and Paper Industry, One Dunwoody Park, Atlanta, GA 30341.

¹ These test methods are under the jurisdiction of ASTM Committee F11 on Vacuum Cleaners and is the direct responsibility of Subcommittee F11.23 on Filtration.

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