



Designation: D6830 – 02 (Reapproved 2022)

Standard Test Method for Characterizing the Pressure Drop and Filtration Performance of Cleanable Filter Media¹

This standard is issued under the fixed designation D6830; 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 characterizes the operational performance of cleanable filter media under specified laboratory conditions.

1.2 This test method determines the airflow resistance, drag, cleaning requirements, and particulate filtration performance of pulse cleaned filter media.

1.3 This test method determines the comparative performance of cleanable filter media.

1.4 The results obtained from this test method are useful in the design, construction, and selection of filter media.

1.5 The results obtained by this test method should not be used to predict absolute performance of full scale fabric filter (baghouse) facilities, however these results will be useful in selection of proper filter media and identification of recommended operating parameters for these full scale fabric filter facilities.

1.6 The values stated in SI units are to be regarded as standard. The values given in parentheses are mathematical conversions to inch-pound units that are provided for information only and are not considered standard.

1.7 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.8 *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.*

¹ This test method is under the jurisdiction of ASTM Committee D22 on Air Quality and is the direct responsibility of Subcommittee D22.03 on Ambient Atmospheres and Source Emissions.

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2. Referenced Documents

2.1 ASTM Standards:²

D123 Terminology Relating to Textiles

D461 Test Methods for Felt (Withdrawn 2003)³

D737 Test Method for Air Permeability of Textile Fabrics

D1356 Terminology Relating to Sampling and Analysis of Atmospheres

E832 Specification for Laboratory Filter Papers

F740 Definitions of Terms Relating to Filtration (Withdrawn 2002)³

2.2 Other Standards:

Draft Generic Verification Protocol for Baghouse Filtration Products⁴

Standard Operating Procedures for Verification Testing of Baghouse Filtration Products Using LTG/FEMA Test Apparatus, Draft, December⁵

VDI 3926, Part 2 Testing of Filter Media for Cleanable Filters under Operational Conditions⁶

3. Terminology

3.1 *Definitions*—For definitions of other terms used in this test method, refer to Terminologies D123, D1356, and F740, as well as 11.1 of this test method.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *fabric conditioning period, n*—the period during which the fabric specimen is conditioned within the test apparatus by subjecting it to 10 000 rapid compressed air cleaning pulses at 3–5 s between pulses. During the conditioning period the specimen is subjected to test method specifications for dust and gas flow rates.

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.

⁴ Generic Verification Protocol for Baghouse Filtration Products, RTI, Research Triangle Park, NC, September 2001.

⁵ Test/QA Plan for the Verification Testing of Baghouse Filtration Products, ETS, Inc., October 2000.

⁶ Verein Deutscher Ingenieure (VDI 3926, Part 2), "Testing of Filter Media For Cleanable Filters under Operational Conditions," December, 1994. Available from Beuth Verlag GmbH, 10772 Berlin, Germany.