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.

Designation: D6824 – 13 (Reapproved 2018)

An American National Standard

Standard Test Method for Determining Filterability of Aviation Turbine Fuel[1]

This standard is issued under the fixed designation D6824; 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 a procedure for determining the filterability of aviation turbine fuels (for other middle distillate fuels, see Test Method D6426).

NOTE 1—ASTM specification fuels falling within the scope of this test method are Specifications D1655 and D6615 and the military fuels covered in the military specifications listed in 2.2.

1.2 This test method is not applicable to fuels that contain undissolved water.

1.3 The values stated in SI units are to be regarded as standard. The values given in parentheses after SI units are provided for information only and are not considered 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *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]

D1655 Specification for Aviation Turbine Fuels

D4057 Practice for Manual Sampling of Petroleum and Petroleum Products

D4176 Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)

D4177 Practice for Automatic Sampling of Petroleum and Petroleum Products

D4860 Test Method for Free Water and Particulate Contamination in Middle Distillate Fuels (Clear and Bright Numerical Rating)

D5452 Test Method for Particulate Contamination in Aviation Fuels by Laboratory Filtration

D6300 Practice for Determination of Precision and Bias Data for Use in Test Methods for Petroleum Products and Lubricants

D6426 Test Method for Determining Filterability of Middle Distillate Fuel Oils

D6615 Specification for Jet B Wide-Cut Aviation Turbine Fuel

2.2 *Military Standards:*[3]

MIL-DTL-5624 Turbine Fuel, Aviation, Grades JP-4, JP-5, and JP-5/JP-8 ST

MIL-DTL-25524 Turbine Fuel, Aviation, Thermally Stable

MIL-DTL-38219 Turbine Fuels, Low Volatility, JP-7

MIL-DTL-83133 Turbine Fuels, Aviation, Kerosine Types, NATO F-34 (JP-8), NATO F-35, and JP-8+100

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *filterability, n*—a measure of the rapidity with which a standard filter medium is plugged by insoluble matter in fuel and may be described as a function of pressure or volume:

3.1.1.1 *filterability (by pressure), n*—the pressure drop across a filter medium when 300 mL of fuel is passed at a rate of 20 mL/min.

3.1.1.2 *filterability (by volume), n*—the volume of fuel passed when a pressure of 104 kPa (15 psig) is reached.

3.1.1.3 *Discussion*—Filterability by volume is used when less than 300 mL passes the filter at a pressure up to 104 kPa (15 psig).

3.1.1.4 *filterability quality factor (F-QF), n*—a value that defines the filter plugging tendency of a fuel caused by particulates.

3.1.1.5 *Discussion*—The F-QF value is calculated using the volume and pressure attained at the end of the test cycle,

[1] This test method is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and is the direct responsibility of Subcommittee D02.J0.01 on Jet Fuel Specifications.

Current edition approved Oct. 1, 2018. Published November 2018. Originally approved in 2002. Last previous edition approved in 2013 as D6824 – 13ε1. DOI: 10.1520/D6824-13R18.

[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 Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098.

Copyright © ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. United States