



Standard Test Method for Determining Filter Blocking Tendency^{1, 2}

This standard is issued under the fixed designation D2068; 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.

INTRODUCTION

This test method describes 3 procedures using different filter media. The result of any test is dependent on the filter mandated in the procedure. If a specification requires a specific D2068 procedure, do not substitute a different procedure or filter without agreement from the specifier.

1. Scope*

1.1 This test method covers three procedures for the determination of the filter blocking tendency (FBT) and filterability of middle distillate fuel oils and liquid fuels such as biodiesel and biodiesel blends. The 3 procedures and associated filter types, are applicable to fuels within the viscosity range of 1.3 to 6.0 mm²/s at 40°C.

NOTE 1—ASTM specification fuels falling within the scope of this test method are: Specifications **D396** Grades No 1 and 2; Specification **D975** Grades 1-D, low sulfur 1-D and 2-D; Specification **D2880** Grades 1-GT and 2-GT; Specification **D6751**.

1.2 This test method is not applicable to fuels that contain free (undissolved) water (see 7.3).

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this 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:³

D396 Specification for Fuel Oils

D975 Specification for Diesel Fuel Oils

D2880 Specification for Gas Turbine Fuel Oils

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)

D6426 Test Method for Determining Filterability of Middle Distillate Fuel Oils

D6751 Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels

2.2 ISO Standard:⁴

ISO 5636-5 Paper and Board—Determination of Air Permeance and Air Resistance (Medium Range) Part 5 Gurley Method

2.3 ASTM Adjuncts:

D2PP, Determination of Precision and Bias Data for Use in Test Methods for Petroleum Products⁵

CompTM, Standard Practice for Statistical Assessment and Improvement of the Expected Agreement between Two Test Methods that Purport to Measure the Same Property of a Material⁵

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *filter blocking tendency (FBT)*, *n*—of certain fuels, a calculated dimensionless value that defines the tendency of particulates in a fuel to plug or block a filter.

3.1.1.1 *Discussion*—The value is calculated using the pressure across the filter or the volume of fuel filtered at the end of the test. Depending on the outcome of the test, one of two

¹ This test method is under the jurisdiction of ASTM Committee **D02** on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee **D02.14** on Stability and Cleanliness of Liquid Fuels.

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² This standard has been developed through the cooperative effort between ASTM and the Energy Institute, London.

³ 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.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

⁵ This adjunct has been withdrawn and is no longer available.

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