



Designation: D6217 – 11 (Reapproved 2016)



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Standard Test Method for Particulate Contamination in Middle Distillate Fuels by Laboratory Filtration¹

This standard is issued under the fixed designation D6217; 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 mass of particulate contamination in a middle distillate fuel by filtration. This test method is suitable for all No. 1 and No. 2 grades in Specifications [D396](#), [D975](#), [D2880](#) and [D3699](#) and for grades DMA and DMB in Specification [D2069](#).

1.2 This test method is not suitable for fuels whose flash point as determined by Test Methods [D56](#), [D93](#) or [D3828](#) is less than 38 °C.

NOTE 1—Middle distillate fuels with flash points less than 38 °C have been ignited by discharges of static electricity when the fuels have been filtered through inadequately bonded or grounded membrane filter systems. See Test Methods [D2276](#) and [D5452](#) for means of determining particulate contamination in Specification [D1655](#) aviation turbine fuels and other similar aviation fuels. See Guide [D4865](#) for a more detailed discussion of static electricity formation and discharge.

1.3 This test method has not been validated for testing biodiesel, such as meeting Specification [D6751](#) or blends of middle distillates and biodiesel, such as meeting Specification [D7467](#), or both. Test Method [D7321](#) has been determined to be suitable for testing B100 and all blends of middle distillates and biodiesel.

NOTE 2—No. 1 and No. 2 grades in Specifications [D396](#) or [D975](#) currently allow up to 5% biodiesel meeting Specification [D6751](#). Samples containing biodiesel can result in partial dissolution or compromise of the membrane filters and give erroneous results.

1.4 The precision of this test method is applicable to particulate contaminant levels between 0 g/m³ to 25 g/m³ provided that 1 L samples are used and the 1 L is filtered completely. Higher levels of particulate contaminant can be measured, but are subject to uncertain precision.

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

1.6 *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

[D56](#) Test Method for Flash Point by Tag Closed Cup Tester
[D93](#) Test Methods for Flash Point by Pensky-Martens Closed Cup Tester

[D396](#) Specification for Fuel Oils

[D975](#) Specification for Diesel Fuel Oils

[D1193](#) Specification for Reagent Water

[D1655](#) Specification for Aviation Turbine Fuels

[D2069](#) Specification for Marine Fuels (Withdrawn 2003)³

[D2276](#) Test Method for Particulate Contaminant in Aviation Fuel by Line Sampling

[D2880](#) Specification for Gas Turbine Fuel Oils

[D3699](#) Specification for Kerosine

[D3828](#) Test Methods for Flash Point by Small Scale Closed Cup Tester

[D4057](#) Practice for Manual Sampling of Petroleum and Petroleum Products

[D4865](#) Guide for Generation and Dissipation of Static Electricity in Petroleum Fuel Systems

[D5452](#) Test Method for Particulate Contamination in Aviation Fuels by Laboratory Filtration

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

[D7321](#) Test Method for Particulate Contamination of Biodiesel B100 Blend Stock Biodiesel Esters and Biodiesel Blends by Laboratory Filtration

[D7467](#) Specification for Diesel Fuel Oil, Biodiesel Blend (B6 to B20)

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 [D02.14](#) on Stability and Cleanliness of Liquid Fuels.

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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.