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: D7236 – 16a (Reapproved 2021)

Standard Test Method for Flash Point by Small Scale Closed Cup Tester (Ramp Method)[1,2]

This standard is issued under the fixed designation D7236; 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 flash point test method is a dynamic test method and depends on a definite rate of temperature increase to control the precision of the test method. The rate of heating may not in all cases give the precision quoted in the test method because of the low thermal conductivity of certain materials. The use of an equilibrium method such as Test Methods D3828, Method B improves the prediction of flammability for such materials, as the vapors above the test specimen and the test specimen are closer to thermal equilibrium.

Flash point values are a function of the apparatus design, the condition of the apparatus used, and the operational procedure carried out. Flash point can therefore only be defined in terms of a standard test method, and no general valid correlation can be guaranteed between results obtained by different test methods or with test apparatus different than that specified.

1. Scope

1.1 This test method covers the determination of the flash point of aviation turbine fuel, diesel fuel, kerosine and related products in the temperature range of 40 °C to 135 °C by a small scale closed cup apparatus.

1.2 This test method is only applicable to homogeneous materials that are liquid at or near ambient temperature and at temperatures required to perform the test.

1.3 This test method is not applicable to liquids contaminated by traces of highly volatile materials.

1.4 This test method is a dynamic method and depends on a definite rate of temperature increase. It is one of many flash point methods available, and every flash point test method, including this one, is an empirical one.

1.5 If the user's specification requires a defined flash point method, neither this test nor any other method should be substituted for the prescribed method without obtaining comparative data and an agreement from the specifier.

1.6 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this 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.* For specific hazard statements, see Section 7 and the Material Safety Data Sheet for the product being tested.

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.*

2. Referenced Documents

2.1 *ASTM Standards:*[3]

D3828 Test Methods for Flash Point by Small Scale Closed Cup Tester

D4057 Practice for Manual Sampling of Petroleum and Petroleum Products

D4177 Practice for Automatic Sampling of Petroleum and Petroleum Products

[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 D02.08 on Volatility.

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[2] This test method is being jointly developed and harmonized with the Energy Institute.

[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.

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