



Designation: D8254 – 19

Standard Test Method for Flash and Fire Points of Asphalt by Cleveland Open Cup Tester¹

This standard is issued under the fixed designation D8254; 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 and fire point test method is a dynamic method and depends on definite rates of temperature increases to control the precision of the test method. Its primary use is for viscous materials having flash point of 79 °C (174 °F) and above. It is also used to determine fire point, which is a temperature above the flash point, at which the test specimen will support combustion for a minimum of 5 s. Do not confuse this test method with Test Method [D4206](#), which is a sustained burning test, open cup type, at a specific temperature of 49 °C (120 °F).

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 from that specified.

1. Scope

1.1 This test method describes the determination of the flash point and fire point of asphalt by a manual Cleveland open cup apparatus or an automated Cleveland open cup apparatus.

NOTE 1—Apparatus is the same as described in Test Method [D92](#) with the addition of the materials for the skin prevention technique.

1.2 This test method is applicable to asphalts that can form a skin, and those that do not form a skin during heat treatment.

1.3 This test method is applicable to products with flash points above 79 °C (174 °F) and below 400 °C (752 °F), except fuel oils.

1.4 The precision has been determined over the temperature range of 300 °C to 370 °C (572 °F to 698 °F).

1.5 The values stated in SI units are to be regarded as the standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered 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, health, and environmental practices and deter-*

mine the applicability of regulatory limitations prior to use. For specific warning statements, see [6.4](#), [7.1](#), [11.1](#), [11.2.3](#), and [11.3.4](#).

1.7 *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

[D92](#) Test Method for Flash and Fire Points by Cleveland Open Cup Tester

[D140](#) Practice for Sampling Asphalt Materials

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

[D4177](#) Practice for Automatic Sampling of Petroleum and Petroleum Products

[D4206](#) Test Method for Sustained Burning of Liquid Mixtures Using the Small Scale Open-Cup Apparatus

[E1](#) Specification for ASTM Liquid-in-Glass Thermometers

[E300](#) Practice for Sampling Industrial Chemicals

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 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.