



Designation: D6749 – 02 (Reapproved 2018)

Standard Test Method for Pour Point of Petroleum Products (Automatic Air Pressure Method)¹

This standard is issued under the fixed designation D6749; 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 covers an alternative procedure for the determination of pour point of petroleum products using an automatic apparatus.

1. Scope

1.1 This test method covers the determination of pour point of petroleum products by an automatic apparatus that applies a slightly positive air pressure onto the specimen surface while the specimen is being cooled.

1.2 This test method is designed to cover the range of temperatures from -57°C to $+51^{\circ}\text{C}$; however, the range of temperatures included in the (1998) interlaboratory test program only covered the temperature range from -51°C to -11°C .

1.3 Test results from this test method can be determined at either 1°C or 3°C testing intervals.

1.4 This test method is not intended for use with crude oils.

NOTE 1—The applicability of this test method on residual fuel samples has not been verified. For further information on the applicability, refer to 13.4.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

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

D97 Test Method for Pour Point of Petroleum Products

D4057 Practice for Manual Sampling of Petroleum and Petroleum Products

D4177 Practice for Automatic Sampling of Petroleum and Petroleum Products

2.2 *Energy Institute Standard:*

IP 15 Test Method for Pour Point of Petroleum Products³

3. Terminology

3.1 *Definitions:*

3.1.1 *pour point, n*—in petroleum products, lowest temperature at which movement of the test specimen is observed under prescribed conditions of test.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *air pressure, n*—regulated slightly positive air pressure gently applied onto the specimen surface in the airtight test jar that causes upward movement of the specimen in the communicating tube, which has one end inserted into the test specimen and the other end at atmospheric pressure.

3.2.2 *no-flow point, n*—in petroleum products, temperature of the test specimen at which a wax crystal structure of the test specimen or viscosity increase, or both, impedes movement of the surface of the test specimen under the conditions of the test.

3.2.2.1 *Discussion*—The no-flow point occurs when, upon cooling, the formation of wax crystal structures or viscosity increase, or both, has progressed to the point where the applied observation device no longer detects movement under the

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 D02.07 on Flow Properties.

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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 Available from Energy Institute, 61 New Cavendish St., London, W1G 7AR, U.K., <http://www.energyinst.org>.