



Designation: D127 – 19



Designation: 133/79 (87)

Standard Test Method for Drop Melting Point of Petroleum Wax, Including Petrolatum¹

This standard is issued under the fixed designation D127; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This test method covers the determination of the drop melting point of petroleum wax. It is used primarily for petrolatums and other microcrystalline wax.

NOTE 1—Additional methods used for petroleum waxes are Test Method [D87](#) and Test Method [D938](#). Results obtained may differ, depending on the method used. For pharmaceutical petrolatum, Test Method D127 usually is used.

1.1.1 *Test Method A*—The dropping point of wax is determined with a mercury in glass thermometer, as stated below in [6.3](#). (**Warning**—Mercury has been designated by many regulatory agencies as a hazardous substance that can cause serious medical issues. Mercury, or its vapor, has been demonstrated to be hazardous to health and corrosive to materials. Use Caution when handling mercury and mercury-containing products. See the applicable product Safety Data Sheet (SDS) for additional information. The potential exists that selling mercury or mercury-containing products, or both, is prohibited by local or national law. Users must determine legality of sales in their location.)

1.1.2 *Test Method B*—The dropping point of wax determined in a dropping point cup in an instrument which detects the drop and measures the temperature electronically, with a platinum thermometer instead of with mercury. Mercury has been recognized as a poison and a health hazard. Removing mercury from laboratories is a way of making the measuring process more inherently safe. The instrumental dropping point

method has shown to produce results that are close to those determined by the original Test Method D127, Method A.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *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.*

1.4 *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

[D87 Test Method for Melting Point of Petroleum Wax \(Cooling Curve\)](#)

[D938 Test Method for Congealing Point of Petroleum Waxes, Including Petrolatum](#)

[D3104 Test Method for Softening Point of Pitches \(Mettler Softening Point Method\)](#)

[D3954 Test Method for Dropping Point of Waxes](#)

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

[E177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods](#)

[E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method](#)

TEST METHOD A

3. Terminology

3.1 Definitions:

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.

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 [D02.10.0A](#) on Physical/Chemical Properties.

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This test method was adopted as a joint ASTM-IP standard in 1964. In the IP, this test method is under the jurisdiction of Standardization Committee.

In 1963, the title, scope, and definition were changed to define the determination of “drop melting point.” Sections on procedure, report, and precision were revised, and a new section on significance was added.

In 1964, minor editorial changes and additions to this method were made for its publication as a joint ASTM-IP standard.

Only Method A of this test method is equivalent to IP 133/79 (87).

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