



Designation: D 127 – 87 (Reapproved 2004)

An American National Standard
Technical Association of Pulp and Paper Industry
Tentative Method T 634ts-64



Designation: 133/79 (87)

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

This standard is issued under the fixed designation D 127; 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 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 D 87 and Test Method D 938. Results obtained may differ, depending on the method used. For pharmaceutical petrolatum, Test Method D 127 usually is used.

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

2. Referenced Documents

2.1 *ASTM Standards:*²

- D 87 Test Method for Melting Point of Petroleum Wax (Cooling Curve)
- D 938 Test Method for Congealing Point of Petroleum Waxes, Including Petrolatum

¹ This test method is under the jurisdiction of ASTM Committee D02 on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee D02.10 on Properties of Petroleum Wax.

Current edition approved July 1, 2004. Published July 2004. Originally approved in 1922. Last previous edition approved in 1999 as D 127–87 (1999).

This test method is sponsored jointly by the Technical Association of Pulp and Paper Industry and ASTM International.

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.

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.

E 1 Specification for ASTM Liquid-in-Glass Thermometers

3. Terminology

3.1 *Definitions:*

3.1.1 *drop melting point of petroleum wax*—the temperature at which material becomes sufficiently fluid to drop from the thermometer used in making the determination under definite prescribed conditions.

4. Summary of Test Method

4.1 Specimens are deposited on two thermometer bulbs by dipping chilled thermometers into the sample. The thermometers bearing the specimens are placed in test tubes and heated by means of a water bath until the specimens melt and the first drop falls from each thermometer bulb. The average of the temperatures at which these drops fall is the drop melting point of the sample.

5. Significance and Use

5.1 Melting point is a wax property that is of interest to most wax consumers. It can be an indication of the performance properties of the wax. Drop melting point, Test Method D 127, is often used to measure the melting characteristics of petrolatums and other high viscosity petroleum waxes.

6. Apparatus

6.1 *Test Tubes*—Standard test tubes, 25 mm (1 in.) in outside diameter and 150 mm (6 in.) long. The test tubes shall be supplied with corks grooved at the sides to permit air circulation and bored in the exact center to receive the thermometer.

6.2 *Bath*—A transparent container of not less than 1500-mL capacity, that will permit the immersion of the test tubes to a depth of at least 100 mm and still leave a depth of 15 mm of water below the bottoms of the test tubes.

6.3 *Thermometer*, having a range as shown below and conforming to the requirements as prescribed in Specification E 1 or in specifications for IP Standard Thermometers: