



Standard Test Method for Blocking and Picking Points of Petroleum Wax¹

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1. Scope

1.1 This test method covers the determination of the blocking point and picking point of petroleum wax.

1.2 **WARNING**—Mercury has been designated by many regulatory agencies as a hazardous material that can cause central nervous system, kidney and liver damage. Mercury, or its vapor, may be hazardous to health and corrosive to materials. Caution should be taken when handling mercury and mercury containing products. See the applicable product Material Safety Data Sheet (MSDS) for details and EPA's website—<http://www.epa.gov/mercury/faq.htm>—for additional information. Users should be aware that selling mercury and/or mercury containing products into your state or country may be prohibited by law.

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

1.4 *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

D87 Test Method for Melting Point of Petroleum Wax (Cooling Curve)

D938 Test Method for Congealing Point of Petroleum Waxes, Including Petrolatum

D2423 Test Method for Surface Wax on Waxed Paper or Paperboard

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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.

E1 Specification for ASTM Liquid-in-Glass Thermometers

3. Terminology

3.1 Definitions:

3.1.1 *wax blocking point*—the lowest temperature at which film disruption occurs across 50 % of the waxed paper surface when the test strips are separated.

3.1.2 *wax picking point*—the temperature at which the first film disruption occurs on the waxed paper when test strips are separated.

4. Summary of Test Method

4.1 Paper test specimens are coated with the wax sample, folded with the waxed surfaces together, and placed on a blocking plate. The plate is heated at one end and cooled at the other end to impose a measured temperature gradient along its length. After a conditioning period on the plate, the specimens are removed, unfolded, and examined. The points of initial film disruption (picking point) and where 50 % of the specimen width is disrupted (50 % blocking point) are noted. The temperatures of corresponding points on the blocking plate are reported as the picking point and blocking point or blocking range.

5. Significance and Use

5.1 Blocking of waxed paper, because of the relatively low temperatures at which it may occur, can be a major problem to the paper-coating industry. For example, when the waxed surfaces in a roll of waxed paper stick together, upon separation the surface films are marred and the glossy finish is destroyed. The wax picking point and the wax blocking point indicate an approximate temperature range at or above which waxed surfaces in contact with each other are likely to cause surface film injury.

6. Apparatus

6.1 *Wax Coating Device*—Any manual- or machine-driven waxer that gives uniform coatings of the desired weights to a strip of paper not less than 51 mm (2 in.) wide.

6.2 *Trimming Board*, or other device for cutting paper strips.

6.3 *Paper Scales*, sensitive to 0.002 g, or suitable balance for measuring basis weights of unwaxed and waxed paper.