Designation: D1146 – 00 (Reapproved 2018)ε1

Standard Test Method for Blocking Point of Potentially Adhesive Layers[1]

This standard is issued under the fixed designation D1146; 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.

ε[1] NOTE—Footnote 1 was corrected editorially in May 2019.

1. Scope

1.1 This test method covers the determination of the blocking point of a thermoplastic or a hygroscopic layer or coating of potentially adhesive material. Potentially adhesive materials comprise those materials in a substantially nonadhesive state which may be activated to an adhesive state by application of heat or solvents.

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]

D907 Terminology of Adhesives

3. Terminology

3.1 *Definitions*—Many terms in this test method are defined in Terminology D907.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *adhesive blocking, n*—the blocking of a potentially adhesive face and a standard test paper.

3.2.2 *blocking, n*—the adhesion between touching layers of similar or dissimilar material, such as occurs under moderate pressures during storage or use.

3.2.3 *cohesive blocking, n*—the blocking of two similar, potentially adhesive faces.

3.2.4 *critical humidity, n*—the lowest humidity at which blocking of a given degree occurs.

3.2.5 *critical temperature, n*—the lowest temperature at which blocking of a given degree occurs.

3.2.6 *first degree blocking, n*—an adherence between the surfaces under test of such degree that when the upper specimen is lifted the lower specimen will cling thereto, but may be parted with no evidence of damage to either surface.

3.2.7 *second degree blocking, n*—an adherence of such degree that when the surfaces under tests are parted one surface or the other will be found to be damaged.

NOTE 1—It is permissible to designate such other degrees of blocking as may be agreed upon between the manufacturer and the purchaser of the adhesive.

4. Significance and Use

4.1 Since some potentially adhesive materials are both thermoplastic and hygroscopic, this test method provides means for estimating, on the same material, both thermoplastic and hygroscopic blocking. Because some requirements are more strict than others, two varying degrees of blocking are recognized and defined: (*1*) First degree blocking, and (*2*) Second degree blocking. Two types of blocking are covered: (*1*) Cohesive blocking, and (*2*) Adhesive blocking.

5. Apparatus and Materials

5.1 *Constant-Temperature Oven,* capable of maintaining temperatures up to 85 ± 1°C (185 ± 2°F), and of sufficient size to hold one or more desiccators of the type described in 5.2.

5.2 *Desiccators,* for use as humidity chambers, with a minimum diameter of 150 mm (6 in.). The desiccators are

[1] This test method is under the jurisdiction of ASTM Committee D14 on Adhesives and is the direct responsibility of Subcommittee D14.10 on Working 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.