



Designation: D 5375/D 5375M – 98

## Standard Test Methods for Liner Removal at High Speeds from Pressure-Sensitive Label Stock<sup>1</sup>

This standard is issued under the fixed designation D 5375/D 5375M; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 These test methods cover the measurement of the adherence of the release liner to the adhesive of a pressure-sensitive adhesive label.

1.2 These test methods provide means of assessing the uniformity of the adhesion to the liner of a given type of pressure-sensitive label. The assessment may be within a sheet or roll between sheets or rolls or between production lots.

1.3 Variation in the label backing, liner, liner release coating, adhesive, and adhesive coating weight, affect the response. Therefore, these methods cannot be used to pinpoint the specific cause(s) of nonuniformity.

1.4 These test methods may not be appropriate to test labels having either relatively stiff backings or stiff liners, or backings showing high stretch at low forces. These characteristics will result in a high variability of the test response that is not a true indication of the real nature of the adhesive bond.

1.5 The values stated in either SI or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system must be used independently, without combining values in any way.

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

### 2. Referenced Documents

#### 2.1 ASTM Standards:

D 996 Terminology of Packaging and Distribution Environments<sup>2</sup>

D 3715/D 3715M Practice for Quality Assurance of Pressure-Sensitive Tapes<sup>2</sup>

D 4332 Practice for Conditioning Containers Package or Package Components for Testing<sup>2</sup>

<sup>1</sup> These test methods are under the jurisdiction of ASTM Committee D-10 on Packaging and are the direct responsibility of Subcommittee D10.14 on Tape and Labels.

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<sup>2</sup> Annual Book of ASTM Standards, Vol 15.09.

E 122 Practice for Choice of Sample Size to Estimate a Measure of Quality for a Lot or Process<sup>3</sup>

### 3. Terminology

#### 3.1 Definitions:

3.1.1 General definitions for packaging and distribution environments are in accordance with Terminology D 996.

#### 3.2 Definitions of Terms Specific to This Standard:

3.2.1 *pressure-sensitive label*—the combination of face material, pressure-sensitive adhesive, and liner.

3.2.1.1 *Discussion*—The adhesive is permanently tacky and instantly adheres to whatever surface the label is designed for. Also, defined as a self-adhering label.

### 4. Summary of Test Methods

4.1 *Test Method A*—The label stock is adhered to a rigid platform with double-coated tape with the liner side up. The liner is peeled from the adhesive at a specific rate. The liner is peeled back over itself at 180° angle.

4.2 *Test Method B*—The label stock is adhered to a rigid platform with double-coated tape with the liner side up. The liner is peeled from the adhesive at a specified rate. The liner is peeled from the label stock at an angle of 90° to the stock.

### 5. Significance and Use

5.1 These test methods are a tool for development and quality assurance use. Given a specific pressure-sensitive label and liner and a requirement in terms of the minimum for maximum peel value expected for this liner removal from the label, the data from the test can be used in conjunction with acceptance criteria.

### 6. Apparatus

6.1 *Specimen Cutter*—The specimen cutter shall hold two single-edged razor blades in parallel planes, a precise distance apart, to form a cutter of exact specimen widths. Two cutters, 12.7 and 25.4-mm or 0.5 and 1-in. cutting width, shall be available. (See Fig. 1.)

NOTE 1—The 12.7-mm or 0.5 in. cutter shall consist of a 0.5 in. thick by 200 mm or 8 in. length of aluminum bar stock 12.7-mm or 0.5 in. wide.

<sup>3</sup> Annual Book of ASTM Standards, Vol 14.02.