

Australian Standard®

Methods of test for single sided and double sided pressure-sensitive adhesive tape

Method 1.13: Adhesion—Resistance to shear (holding power) at ambient temperature

PREFACE

This Standard was prepared by the Standards Australia Committee PK-025, Packaging Code at the request of Australian Industry.

The objective of this Standard is to specify a method for determining the low-speed release value of the protective release liner from the surface of the adhesive face of pressure-sensitive adhesive plastic label stock.

METHOD

1 SCOPE

This Standard specifies a method for determining the low-speed release value of the protective release liner from the surface of the adhesive face of pressure-sensitive adhesive plastic label stock.

2 REFERENCE DOCUMENTS

The following documents are referred to in this Standard:

AS

2400 Packaging

2400.1 Part 1: Glossary of packaging terms

3 DEFINITIONS

For the purposes of this Standard, the following definitions in AS 2400.1 apply.

4 PRINCIPLE

The release liner is stripped from the facestock or, alternatively, the facestock is stripped from the release liner, under specified conditions of angle and speed.

5 APPARATUS

The following apparatus is required:

- (a) A machine, capable of stripping label stock up to 50 mm wide, at an angle of 90 degrees or 180 degrees, as appropriate, at a speed of 300 ± 6 mm/min (or 7.60 ± 0.20 m/min, as appropriate), and simultaneously measuring the stripping force.
- (b) Metal or glass backing panel, approximately 300 mm $\times$ 200 mm.
- (c) Double-sided self-adhesive tape or similar.

6 TEST CONDITIONS

Testing shall be conducted at $23 \pm 5^\circ\text{C}$ and $50 \pm 5\%$ relative humidity.

7 TEST PIECES

Five test pieces of label stock, each measuring approximately 300 mm $\times$ 50 mm with parallel edges cut in the machine (or mesh) direction, are required.

8 PROCEDURE

The procedure shall be as follows:

- (a) Condition the test pieces at $23 \pm 5^\circ\text{C}$ and $50 \pm 5\%$ relative humidity for a minimum of 4 h, and carry out Steps (b) to (d) under the same conditions.
- (b) Firmly fix a test piece to the backing panel using the double-sided self-adhesive tape (which should cover the full test area of the test piece), so that the label stock can be peeled apart.
- (c) The facestock may be peeled from the release liner or vice versa, depending on how the test piece is applied to the backing panel.
- (d) Clamp the backing panel in the fixed jaw of the machine, and clamp the top layer of the label stock into the movable jaw so that the label stock is clamped at an angle of 90 degrees or 180 degrees, as appropriate.
- (e) At a speed of 300 ± 6 mm/min (or 7.60 ± 0.20 m/min, as appropriate), measure the force required to strip the release liner or facestock, as appropriate, over a distance of 150 mm, ignoring the first and the last 25 mm.
- (f) It may be necessary to attach a lead strip to allow testing up to a distance of 150 mm.
- (g) Repeat Steps (a) to (d) using each of the remaining four test pieces.

9 CALCULATION

Determine the mean of the five values of force, in newtons per 25 mm or 50 mm width.

10 REPORT

The report shall include the following:

- (a) The release value, in newtons per 25 mm or 50 mm width.
- (b) Whether the release liner was peeled back from the facestock, or vice versa.
- (c) The speed of the machine.
- (d) The width of the test strip of label stock.
- (e) The angle of strip.
- (f) Reference to this Australian Standard, i.e. AS 2313.1.13