

Australian Standard™

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

Method 1.6: Adhesion—Unwind force

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PREFACE

This Standard was prepared by the Standards Australia Committee PK-025, Packaging Code to supersede AS/NZS 1635.7.1:1995, *Methods of test for pressure-sensitive adhesive tape, Part 7.1: Unwind force*.

The objective of this edition is to revise the apparatus and materials used in the procedure of the Standard.

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STANDARDS AUSTRALIA

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

Method 1.6: Adhesion—Unwind force

1 SCOPE

This Standard specifies the method for determining the force required to unwind pressure-sensitive adhesive tape from a roll.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

2193 Calibration and classification of force measuring systems

3 APPARATUS

The following apparatus is required:

- (a) *Tension testing machine*—complying with the requirements of AS 2193 for Grade B machines over suitable load ranges, and having a rate of travel of 300 ± 10 mm/min of the moving jaw or carriage.
- (b) *Unwind test jig* (see Figure 1).
- (c) *Unwind machine*—which allows the unwind force to be measured by means of an indicator and calibrated scale (see Figure 2).

4 TEST CONDITIONS

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

5 PREPARATION OF ROLL FOR TESTING

The roll shall be conditioned at $23 \pm 5^\circ\text{C}$ and $50 \pm 5\%$ relative humidity for 24 ± 1 h prior to testing.

6 PROCEDURE**6.1 Low speed unwind**

The procedure shall be as follows:

- (a) Measure and record the width of the roll of tape to the nearest 0.5 mm.
- (b) Place the roll in the unwind test jig (3(b)) and attach the assembly to one moving jaw or carriage of the tension testing machine.
- (c) Unroll approximately 75 mm of the tape by hand and make a tab by folding the last 25 mm of tape on to itself, adhesive to adhesive.
- (d) Insert the tab in the other clamp (jaw or carriage) of the tension testing machine (3(a)), and unwind approximately 200 mm of the tape at a rate of 300 ± 10 mm/min.
- (e) Record the maximum force required to unwind the roll, in newtons.