

Australian/New Zealand Standard®

Methods of test for pressure-sensitive adhesive tape

Method 9.1: Thickness

1 SCOPE This Standard sets out the method for determining the thickness of pressure-sensitive adhesive tape.

2 APPARATUS The following apparatus is required:

- (a) *Dead-mass dial-type micrometer*—having two ground and lapped circular surfaces. The surfaces shall be parallel to within 0.002 mm.

The micrometer shall be equipped with a pressor foot having a diameter of 6.3 ± 0.2 mm. The anvil of the micrometer shall be larger in diameter than the pressor foot.

The pressor foot assembly shall be adjusted so as to apply a pressure of 52 ± 1 kPa.

The gauge shall be calibrated to 0.002 mm and capable of repeating its readings to 0.002 mm both at zero setting and on a steel gauge block.

- (b) *Timing device*—accurate to within 1 s.

3 TEST CONDITIONS Testing shall be conducted at $23 \pm 2^\circ\text{C}$ and $50 \pm 5\%$ relative humidity.

4 PREPARATION OF TEST SPECIMENS The roll, from which the test specimen is to be taken, shall be conditioned at $23 \pm 2^\circ\text{C}$ and $50 \pm 5\%$ relative humidity for 24 ± 1 h prior to testing.

The test specimen shall be at least 450 mm long and shall consist of a single thickness of tape.

5 PROCEDURE The procedure shall be as follows:

- (a) Take a test specimen from the freely rotating conditioned roll, the minimum width of which shall be 6 mm, by manually unrolling the roll radially and after discarding the outer three laps of the roll.

NOTE: The speed of removal of the test specimen from the roll is operator-dependent. Usually, a speed of approximately 300 mm/s is attained.

- (b) Before each measurement, ensure that the pressor foot and anvil are clean, and adjust the micrometer to the zero reading.
- (c) Place the test specimen on the anvil of the micrometer, adhesive side up, smoothly but without tension. Lower the pressor foot on to the tape gradually (without impact) allowing it to rest upon the tape for 2 s and then observe the reading on the dial.

- (d) Take five such measurements over the surface of the test specimen at uniform intervals and average the measurements.

6 REPORT The following information shall be reported:

- (a) The average of five measurements as the thickness of the tape, in millimetres.
(b) Reference to this Australian/New Zealand Standard, i.e. AS/NZS 1635.9.1.

This Joint Australian/New Zealand Standard was prepared by the Joint Technical Committee PK/10, Pressure Sensitive Adhesive Tapes. It was approved on behalf of the Council of Standards Australia on 6 December 1994 and on behalf of the Council of Standards New Zealand on 25 November 1994 and published on 5 March 1995.

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