

Australian Standard™

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

**Method 2.5: Physical properties—Water
vapour transmission**



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Australian Paint Manufacturers' Federation
Canmakers Institute of Australia
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PREFACE

This Standard was prepared by the Standards Australia Committee PK-025, Packaging Code to supersede AS/NZS 1635.11.1:1995, *Methods of test for pressure-sensitive adhesive tape, Part 11.1: Water vapour transmission rate*.

The objective of this edition is to revise the apparatus and materials used in the test methods of the AS 1635 series.



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STANDARDS AUSTRALIA

Australian Standard

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

Method 2.5: Physical properties—Water vapour transmission

1 SCOPE

This Standard specifies the method for determining the water vapour transmission rate of pressure-sensitive adhesive tape.

2 REAGENTS

The following reagents are required:

2.1 Isopropynol

Reagent grade.

NOTE: A substitute of isopropynol is acetone, reagent grade.

2.2 Anhydrous calcium chloride

Particle size 0.5 mm to 2.0 mm. (Regenerate calcium chloride to a sufficient anhydrous state by heating at approximately 200°C for 2 h.)

3 APPARATUS AND MATERIALS

The following apparatus and materials are required:

(a) *Humidity cabinet*

Providing a relative humidity of $96 \pm 2\%$ at a temperature of $38 \pm 2^\circ\text{C}$ with no condensation on the test dishes or in the space in which the test dishes are placed. The circulation over the test dishes shall be regarded as negligible.

Alternatively, a desiccator or other suitable vessel containing a saturated solution of potassium sulfate may be used to provide an atmosphere of approximately 96% relative humidity when maintained at a temperature of $38 \pm 2^\circ\text{C}$ in a suitably regulated electric oven.

(b) *Test dishes*

In the shape of flat flanged rectangular cups formed of brass sheet, and having the dimensions shown in Figure 1, which shows three sizes of dishes.

(c) *Analytical balance*

With a capacity of at least 200 g and having an accuracy of ± 0.1 mg.

(d) *Dry silicon carbide paper*

280 grit.

4 TEST CONDITIONS

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