

Australian Standard®

**Complete, filled transport packages—
Methods of test****Method 13: Rolling test**

PREFACE

This Standard was prepared by Standards Australia Committee PK-012, Physical Testing of Packages and Containers, as an additional part to the AS 2582 series of test methods. It is identical with and has been reproduced from ISO 2876:1985, *Packaging—Complete, filled transport packages—Rolling test*.

As this Standard is reproduced from an International Standard, the following modifications apply:

- (a) Its number does not appear on each page of text and its identity is shown on the cover and title page.
- (b) In the source text, ‘this International Standard’ should read ‘this Australian Standard.’
- (c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to equivalent Australian Standards as follows:

<i>Reference to International Standard</i>		<i>Australian Standard</i>	
ISO		AS	
2206	Packaging—Complete, filled transport packages—Identification of parts when testing	2582	Complete, filled transport packages—Methods of test
		2582.1	Method 1: Identification of parts when testing
2233	Packaging—Complete, filled transport packages and unit loads—Conditioning for testing	2582.2	Method 2: Conditioning for testing

1 Scope and field of application

This International Standard specifies a method for conducting rolling tests on a complete, filled transport package. It may be performed either as a single test to investigate the effects of rolling or as part of a sequence of tests designed to measure the ability of a package to withstand a distribution system that includes a rolling hazard.

NOTE — A toppling test may be more suitable for packages which are tall in relation to their base dimensions, or the height of which is small by comparison with base dimensions but which may be stored or transported resting on a side face. The toppling test is recommended for packages where the ratio of the longest to the shortest sides is of the order of 3 : 1 or greater. A method of carrying out a toppling test on a complete, filled transport package is under preparation.

2 References

ISO 2206, *Packaging — Complete, filled transport packages — Identification of parts when testing.*

ISO 2233, *Packaging — Complete, filled transport packages — Conditioning for testing.*

3 Principle

Rolling of the test package so as to impact on each face in turn.

4 Apparatus

Impact surface, horizontal and flat, massive enough to be immovable and rigid enough to be non-deformable under test conditions.

NOTE — In normal circumstances the impact surface provided shall be

- integral with a mass at least 50 times that of the heaviest package to be tested;
- flat, such that no two points on its surface differ by more than 2 mm; however, where one of the dimensions of the test package in contact with the surface is greater than 1 000 mm, a maximum difference in surface level of 5 mm will be acceptable;
- rigid, such that it will not be deformed by more than 0,1 mm when an area of 100 mm² is loaded statically with 10 kg anywhere on the surface;
- sufficiently large to ensure that the test package falls entirely upon the surface.

5 Package preparation

The test package shall normally be filled with its intended contents. However, simulated or dummy contents may be used, on condition that the dimensions and physical properties of such contents shall be as close as possible to those of the intended contents.

Ensure that the test package is closed normally, as if ready for distribution. If simulated or dummy contents are used, ensure that the normal method of closure is still employed.

6 Conditioning

The package shall be conditioned in accordance with one of the conditions described in ISO 2233.

7 Procedure

Whenever possible the test shall be carried out in the same atmospheric conditions as used for conditioning, where this is critical to the materials or application of the package. In other circumstances, the test shall be carried out in atmospheric conditions which are as near as practicable to those used for conditioning.

7.1 Parallelepipedal packages

Define the panels and edges of the test package using the requirements given in ISO 2206.

Place the package on the impact surface (see clause 4) with surface 1 uppermost.

Tilt the package by hand with the edge 3-4 resting on the impact surface until the point of balance on this edge is reached. Then permit it to overbalance without thrust so as to impact on surface 4.

Repeat this procedure until the sequence given in the table is completed.