

Australian/New Zealand Standard™

**Domestic furniture—Freestanding
chests of drawers, wardrobes and
bookshelves/bookcases—Determination
of stability**



AS/NZS 4935:2009

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS-088/CS-091, Commercial/Domestic Furniture. It was approved on behalf of the Council of Standards Australia on 28 August 2009 and on behalf of the Council of Standards New Zealand on 23 October 2009.
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The following are represented on Committee CS-088/CS-091:

Australian Postal Corporation
Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Retailers Association
Business New Zealand
Department of Commerce, Consumer Protection Division, WA
Ergonomics Society of Australia
Furnishing Industry Association of Australia
Furniture Association of New Zealand
Furntech-AFRDI
Ministry of Consumer Affairs, New Zealand
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PREFACE

This Standard was prepared by Joint Standards Australia/Standards New Zealand Committee CS-088/CS-091, Commercial/Domestic Furniture.

This Standard incorporates Amendment No. 1 (June 2013). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

This Standard provides the Australian and New Zealand domestic furniture industries with tests for determining the stability of domestic freestanding chests of drawers, freestanding wardrobes and freestanding bookshelves/bookcases (together 'furniture items'). The aim of these tests is to assist in the reduction of stability problems that may arise from the use of the furniture items. Labelling requirements have been included to draw attention to the dangers the furniture items introduce in the domestic environment.

Furniture items used in the domestic environment are potentially dangerous, especially when children attempt to climb or play on them. The objective of this Standard is to assist in reducing the probability of the furniture items tipping and causing injury to, or the death of, users and children in particular. Consideration of children in the development of this Standard is further discussed in the Foreword.

Due to the many circumstances that may arise in the use of the furniture items, this Standard cannot address all possible aspects of stability. Furniture items that meet this Standard can still tip under certain circumstances, especially when placed on carpet, uneven or sloping flooring, or when subject to extreme use. Therefore, care must be taken wherever freestanding chests of drawers, freestanding wardrobes, freestanding bookshelves/bookcases or similar furniture items can be accessed by children.

In the preparation of this Standard reference was made to ASTM F2057-04, Standard Safety Specification for Chests, Door Chests, and Dressers and ANSI/SOHO S6.5:2008, Small Office/Home Office Furniture—Tests.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

The committee wishes to acknowledge the contribution of Furntech-AFRDI (AFRDI), Furnishing Industry Association of Australia (FIAA) and Department of Commerce, Consumer Protection Division WA (DOCEP).

CONTENTS

	<i>Page</i>
FOREWORD.....	4
1 SCOPE.....	5
2 REFERENCED DOCUMENTS	5
3 DEFINITIONS	5
4 TEST METHODOLOGY AND REQUIREMENTS	6
5 STABILITY TESTS.....	7
6 LABELS, INSTRUCTIONS AND MARKING.....	8
7 TEST REPORT	8
APPENDICES	
A ATTACHMENT DEVICES, WARNING LABELS AND SWING TAGS	9
B WARNING LABELS FOR NON-COMPLYING FURNITURE ITEMS.....	11

FOREWORD

In determining the test criteria for this Standard, Committee CS-088 considered data and documents from a range of organizations, including the following:

- (a) ANSI/SOHO S6.5-2008, Small Office/Home Office Furniture—Tests.
- (b) ASTM F2057-04, Standard Safety Specification for Chests, Door Chests, and Dressers.
- (c) World Health Organization, WHO Growth Standards: Methods and development: Length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age.
- (d) World Health Organization, WHO Reference 2007 Growth reference data for 5–19 years.
- (e) Victorian Government, Child Health Record Growth Charts (CDC 2000 growth charts).
- (f) National Centre for Health Statistics, Clinical Growth Charts.

From this research the Committee decided that the Standard should specifically address the use of the furniture items in the domestic environment by children up to and including 5 years and 11 months of age and in 95th percentile stature and body mass.

The studies referenced above indicate that the 95th percentile body mass for children of this age was approximately 27 kg, and stature was 123 to 125 cm, at the time those studies were conducted. Due to a general trend* towards increases in body mass in recent years, the test mass used in this Standard was increased to 29 kg.

* Norris B and Wilson JR. *The Handbook of Child Measurements and Capabilities-Data for Design Safety*. Institute for Occupational Ergonomics, Department of Manufacturing Engineering and Operations Management, University of Nottingham, University Park, Nottingham. Department of Trade and Industry, UK. 1995.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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1 SCOPE

This Standard specifies test methods for determining the stability performance of domestic freestanding chests of drawers over 500 mm high, freestanding wardrobes over 500 mm high and freestanding bookshelves/bookcases over 600 mm high. Labelling requirements are also specified.

It should be noted that even furniture items passing the test methods specified in this Standard can still tip under certain circumstances.

This Standard applies to furniture items constructed of any materials.

This Standard specifically addresses stability performance in relation to the hazard of children climbing on freestanding items. Climbing is assumed to take place on the face of the furniture item, which may feature common foot or handholds, e.g. doors and extendible elements (drawers and similar), including their associated handles. Furniture items that feature other types of foot or handholds on sides not including doors or extendible elements may present similar hazards but these have not been considered in this method.

The objective of this Standard is to assist in reducing the probability of the defined furniture items tipping and causing injury to, or the death of, users and in particular, children.

2 REFERENCED DOCUMENTS

The following documents were referred to in this Standard:

ISO/IEC

17025 General requirements for the competence of testing and calibration laboratories

3 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

3.1 Bookshelf/bookcase

A freestanding set of shelves over 600 mm tall, primarily intended for the storage of books. It may also contain doors, drawers or other extendible elements.

3.2 Chest of drawers

A freestanding furniture item over 500 mm tall that contains one or more drawers or other extendible elements and intended for the storage of clothing. It may also contain one or more doors or one or more shelves, or both, in various configurations.

3.3 Drawer/extendable element full extension length

The full extension length as measured from the fully closed to the fully open position. The fully open position is that position where the drawer stops or extendible element stops prevent further extension or, where no stops are fitted, the drawer or extendible element is no longer supported by the cabinet.