



# MALAYSIAN STANDARD

MS 1764-3:2004  
(CONFIRMED:2013)

## Furniture - Seating - Part 3: Determination of stability (Domestic)

**ICS: 97.140**

Descriptors: furniture, seating, stability, domestic

NOTE. This MS has been reviewed by the responsible committee and confirmed that its contents are current

© Copyright 2013

**DEPARTMENT OF STANDARDS MALAYSIA**

## DEVELOPMENT OF MALAYSIAN STANDARDS

The **Department of Standards Malaysia (STANDARDS MALAYSIA)** is the national standards and accreditation body of Malaysia.

The main function of STANDARDS MALAYSIA is to foster and promote standards, standardisation and accreditation as a means of advancing the national economy, promoting industrial efficiency and development, benefiting the health and safety of the public, protecting the consumers, facilitating domestic and international trade and furthering international cooperation in relation to standards and standardisation.

Malaysian Standards (MS) are developed through consensus by committees which comprise balanced representation of producers, users, consumers and others with relevant interests, as may be appropriate to the subject at hand. To the greatest extent possible, Malaysian Standards are aligned to or are adoption of international standards. Approval of a standard as a Malaysian Standard is governed by the Standards of Malaysia Act 1996 [Act 549]. Malaysian Standards are reviewed periodically. The use of Malaysian Standards is voluntary except in so far as they are made mandatory by regulatory authorities by means of regulations, local by-laws or any other similar ways.

For the purposes of Malaysian Standards, the following definitions apply:

**Revision:** A process where existing Malaysian Standard is reviewed and updated which resulted in the publication of a new edition of the Malaysian Standard.

**Confirmed MS:** A Malaysian Standard that has been reviewed by the responsible committee and confirmed that its contents are current.

**Amendment:** A process where a provision(s) of existing Malaysian Standard is altered. The changes are indicated in an amendment page which is incorporated into the existing Malaysian Standard. Amendments can be of technical and/or editorial nature.

**Technical corrigendum:** A corrected reprint of the current edition which is issued to correct either a technical error or ambiguity in a Malaysian Standard inadvertently introduced either in drafting or in printing and which could lead to incorrect or unsafe application of the publication.

NOTE: Technical corrigenda are not to correct errors which can be assumed to have no consequences in the application of the MS, for example minor printing errors.

STANDARDS MALAYSIA has appointed **SIRIM Berhad** as the agent to develop, distribute and sell Malaysian Standards.

For further information on Malaysian Standards, please contact:

**Department of Standards Malaysia**  
Ministry of Science, Technology and Innovation  
Level 1 & 2, Block 2300, Century Square  
Jalan Usahawan  
63000 Cyberjaya  
Selangor Darul Ehsan  
MALAYSIA

OR **SIRIM Berhad**  
(Company No. 367474 - V)  
1, Persiaran Dato' Menteri  
Section 2, P. O. Box 7035  
40700 Shah Alam  
Selangor Darul Ehsan  
MALAYSIA

Tel: 60 3 8318 0002  
Fax: 60 3 8319 3131  
<http://www.jsm.gov.my>  
E-mail: [central@jsm.gov.my](mailto:central@jsm.gov.my)

Tel: 60 3 5544 6000  
Fax: 60 3 5510 8095  
<http://www.sirim.my>  
E-mail: [msonline@sirim.my](mailto:msonline@sirim.my)

## CONTENTS

	<b>Page</b>
Committee representation.....	iii
Foreword.....	iv
1 Scope.....	1
2 Definitions.....	1
3 Test equipment.....	1
4 Conditioning.....	3
5 General test requirements.....	3
6 Determination of seat and back loading positions.....	4
7 Test procedures, all seating: experimental method.....	6
8 Test procedures for seating with variable geometry: experimental method.....	11
9 Calculative method.....	19
10 Test report.....	20
Table 1 Values of X and Z.....	14
<b>Figures</b>	
1 Suggested linkage arrangement constraining loading pad.....	2
2 Support apparatus.....	2
3 Loading surface curves for seat and back loading point template.....	5
4 Loading point template.....	6
5 Forwards overturning for chairs and stools.....	7
6 Sideways overturning for chairs without arms.....	8
7 Sideways overturning for chairs with arms.....	9
8 Rewards overbalancing.....	10

**CONTENTS** *(continued)*

	<b>Page</b>
9 Test for tilting chairs with practical example.....	12
10 Method for rocking chairs.....	13
11 Test for reclining chairs with footrests with practical example.....	15
12 Values of Z and X (mm).....	16
13 Reclining chairs without footrests with practical example.....	18

Preview Only

## **Committee representation**

The Mechanical Engineering Industry Standards Committee (ISC F) under whose authority this Malaysian Standard was developed, comprises representatives from the following organisations:

Institut Keselamatan dan Kesihatan Pekerjaan Malaysia  
Jabatan Kerja Raya  
Jabatan Keselamatan dan Kesihatan Pekerjaan Malaysia  
Jabatan Keselamatan dan Perbekalan Gas, Suruhanjaya Tenaga  
Jabatan Standard Malaysia  
Kementerian Pertahanan Malaysia  
Lembaga Kemajuan Perindustrian Malaysia  
Malaysian Iron and Steel Industry Federation  
Petroleum Nasional Berhad  
SIRIM QASI Sdn Bhd (Seksyen Pengujian Produk Mekanikal)  
The Institution of Engineers, Malaysia  
Universiti Kebangsaan Malaysia  
Universiti Malaya  
Universiti Teknologi Malaysia

The Technical Committee on Furniture which developed this Malaysian Standard consists of representatives from the following organisations:

Azas Rekalogam Sdn Bhd  
Guthrie Furniture Sdn Bhd  
Institut Penyelidikan Perhutanan Malaysia  
Jabatan Pendidikan Negeri Selangor  
Malaysian External Trade Development Corporation  
Nagasteel Equipment Sdn Bhd  
SIRIM Berhad (Secretariat)  
Teknion Furniture System (M) Sdn Bhd  
Universiti Malaya  
Universiti Teknologi MARA

## **MS 1764: PART 3:2004**

### **FOREWORD**

This Malaysian Standard was developed by the Technical Committee on Furniture under the authority of the Mechanical Engineering Industry Standards Committee.

MS 1764 consists of the following parts, under the general title, *Furniture – Seating*:

*Part 1: Requirements for the strength and durability of the structure of domestic and contract seating*

*Part 2: Test methods for the determination of strength and durability (domestic)*

*Part 3: Determination of stability (domestic)*

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.