



Government
of Canada

Gouvernement
du Canada

Canadian General
Standards Board Office des normes
générales du Canada

CAN/CGSB-44.232-2008

ICS 97.140

WITHDRAWAL

October 2017

Task Chairs for Office Environments

This National Standard of Canada is hereby withdrawn as information contained therein may no longer represent the most current, reliable, and/or available information on this subject.

The Standards Council of Canada requires that accredited Standards Development Organizations, such as the CGSB, regularly review a consensus Standard to determine whether to re-approve, revise or withdraw. The review cycle is normally five years from the publication date of the latest edition of the Standard. CGSB retains the right to develop a new edition.

The information contained in the Standard was originally developed pursuant to a voluntary standards development initiative of the CGSB. The information contained therein may no longer represent the most current, reliable, and/or available information on this subject. CGSB hereby disclaims any and all claims, representation or warranty of scientific validity, or technical accuracy implied or expressed respecting the information therein contained. The CGSB shall not take responsibility nor be held liable for any errors, omissions, inaccuracies or any other liabilities that may arise from the provision or subsequent use of such information.

RETRAIT

Octobre 2017

Fauteuils de bureau

Cette Norme nationale du Canada est retirée par le présent avis car l'information contenue peut ne plus représenter l'information disponible et/ou l'information la plus actuelle ou la plus fiable à ce sujet.

Le Conseil canadien des normes exige que les organismes accrédités d'élaboration de normes, tel que l'ONGC, effectue régulièrement un examen des normes consensuelles afin de déterminer s'il y a lieu d'en renouveler l'approbation, de les réviser ou de les retirer. Le cycle d'examen d'une norme est généralement de cinq ans à partir de la date de publication de la dernière édition de celle-ci. L'ONGC se réserve le droit d'élaborer une nouvelle édition.

L'information contenue dans la norme a été élaborée initialement en vertu d'une initiative volontaire d'élaboration de normes de l'ONGC. Elle peut ne plus représenter l'information disponible et/ou l'information la plus actuelle ou la plus fiable à ce sujet. L'ONGC décline par la présente toute responsabilité à l'égard de toute affirmation, déclaration ou garantie de validité scientifique ou d'exactitude technique implicite ou explicite relative à l'information contenue dans la norme. L'ONGC n'assumera aucune responsabilité et ne sera pas tenu responsable quant à toute erreur, omission, inexactitude ou autre conséquence pouvant découler de la fourniture ou de l'utilisation subséquente de cette information.

Copies of withdrawn standards are available from the CGSB Sales Centre by telephone at 819-956-0425 or 1-800-665-2472, by fax at 819-956-5740, by Internet at www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html, by e-mail at ncr.CGSB-ONGC@tpsgc-pwgsc.gc.ca or by mail at Sales Centre, Canadian General Standards Board, 11 Laurier Street, Gatineau, Canada K1A 1G6.

Des copies des normes retirées peuvent être obtenues auprès du Centre des ventes de l'ONGC. Il suffit d'en faire la demande par téléphone au 819-956-0425 ou 1-800-665-2472, par télécopieur au 819-956-5740, par Internet à : www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-fra.html, par courriel à ncr.CGSB-ONGC@tpsgc-pwgsc.gc.ca, ou par courrier adressé au Centre des ventes, Office des normes générales du Canada, 11, rue Laurier, Gatineau, Canada K1A 1G6.



Government
of Canada

Canadian General
Standards Board

Gouvernement
du Canada

Office des normes
générales du Canada

CAN/CGSB-44.232-2008
CORRIGENDUM No. 1
RECTIFICATIF N° 1

ICS 97.140

CORRIGENDUM

January 2009

Task Chairs for Office Environment

6. DIMENSIONAL REQUIREMENTS

6.4 Adjustable Components

6.4.4 *Seat Depth Adjustment*

Change the paragraph to read:

Seat Depth Adjustment — The seat depth shall be adjustable by at least 50 mm (2.0 in.) and shall include the range of 420 mm (16.5 in.) to 460 mm (18.1 in.). It shall be lockable at multiple positions within that range (par. 9.1 k.).

©HER MAJESTY THE QUEEN IN RIGHT OF CANADA, as represented by the Minister of Public Works and Government Services, the Minister responsible for the Canadian General Standards Board, (2009). No part of this publication may be reproduced in any form without the prior permission of the publisher.

RECTIFICATIF

Janvier 2009

Fauteuils de bureau

EXIGENCES DIMENSIONNELLES

Composants réglables

Réglage de la profondeur du siège

Modifier l'alinéa comme suit :

Réglage de la profondeur du siège — La profondeur du siège doit être réglable par intervalle d'au moins 50 mm (2.0 po) et doit comprendre la plage comprise entre 420 mm (16.5 po) et 460 mm (18.1 po). Elle doit pouvoir être bloquée à plusieurs positions à l'intérieur de cette plage (par. 9.1.k.).

© SA MAJESTÉ LA REINE DU CHEF DU CANADA, représentée par le ministre des Travaux publics et Services gouvernementaux, le ministre responsable de l'Office des normes générales du Canada (2009). Aucune partie de cette publication ne peut être reproduite d'aucune manière sans la permission préalable de l'éditeur.



Government
of Canada

Gouvernement
du Canada

Canadian General
Standards Board

Office des normes
générales du Canada

CAN/CGSB-44.232-2008

Supersedes CAN/CGSB-44.232-2002

Task Chairs for Office Environments

ICS 97.140



Standards Council of Canada
Conseil canadien des normes

National Standard of Canada

Canada

Experience and excellence
Expérience et excellence



The CANADIAN GENERAL STANDARDS BOARD (CGSB), under whose auspices this National Standard of Canada has been developed is a government agency within Public Works and Government Services Canada. CGSB is engaged in the production of voluntary standards in a wide range of subject areas through the media of standards committees and the consensus process. The standards committees are composed of representatives of relevant interests including producers, consumers and other users, retailers, governments, educational institutions, technical, professional and trade societies, and research and testing organizations. Any given standard is developed on the consensus of views expressed by such representatives.

CGSB has been accredited by the Standards Council of Canada as a national standards-development organization. The standards that it develops and offers as National Standards of Canada conform to the criteria and procedures established for this purpose by the Standards Council of Canada. In addition to standards it publishes as national standards, CGSB produces standards to meet particular needs, in response to requests from a variety of sources in both the public and private sectors. Both CGSB standards and CGSB national standards are developed in conformance with the policies described in the CGSB Policy Manual for the Development and Review of Standards.

CGSB standards are subject to review and revision to ensure that they keep abreast of technological progress. Suggestions for their improvement, which are always welcome, should be brought to the notice of the standards committees concerned. Changes to standards are issued either as separate amendment sheets or in new editions of standards.

An up-to-date listing of CGSB standards, including details on latest issues and amendments, and ordering instructions, is found in the CGSB Catalogue, which is published annually and is available without charge upon request. An electronic version, CAT, is also available. More information is available about CGSB products and services at our Web site — www.ongc-cgsb.gc.ca.

Although the intended primary application of this standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

The testing and evaluation of a product against this standard may require the use of materials and/or equipment that could be hazardous. This document does not purport to address all the safety aspects associated with its use. Anyone using this standard has the responsibility to consult the appropriate authorities and to establish appropriate health and safety practices in conjunction with any applicable regulatory requirements prior to its use. CGSB neither assumes nor accepts any responsibility for any injury or damage that may occur during or as the result of tests, wherever performed.

Attention is drawn to the possibility that some of the elements of this Canadian standard may be the subject of patent rights. CGSB shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly advised that determination of the validity of any such patent rights are entirely their own responsibility.

Further information on CGSB and its services and standards may be obtained from:

The Manager
Strategic Standardization Division
Canadian General Standards Board
Gatineau, Canada
K1A 1G6

The STANDARDS COUNCIL OF CANADA is the coordinating body of the National Standards System, a coalition of independent, autonomous organizations working towards the further development and improvement of voluntary standardization in the national interest.

The principal objects of the SCC are to foster and promote voluntary standardization as a means of advancing the national economy, benefiting the health, safety and welfare of the public, assisting and protecting the consumer, facilitating domestic and international trade, and furthering international cooperation in the field of standards.

A National Standard of Canada (NSC) is a standard prepared or reviewed by an accredited Standards Development Organization (SDO) and approved by the SCC according to the requirements of CAN-P-2. Approval does not refer to the technical content of the standard; this remains the continuing responsibility of the SDO. A NSC reflects a consensus of a number of capable individuals whose collective interests provide, to the greatest practicable extent, a balance of representation of general interests, producers, regulators, users (including consumers), and others with relevant interests, as may be appropriate to the subject in hand. It normally is a standard, which is capable of making a significant and timely contribution to the national interest.

Those who have a need to apply standards are encouraged to use NSCs. These standards are subject to periodic review. Users of NSCs are cautioned to obtain the latest edition from the SDO, which publishes the standard.

The responsibility for approving standards as National Standards of Canada rests with the:

Standards Council of Canada
200-270 Albert Street
Ottawa, Ontario
K1P 6N7

How to order **CGSB** Publications:

- by telephone — 819-956-0425 *or*
— 1-800-665-2472
- by fax — 819-956-5740
- by mail — CGSB Sales Centre
Gatineau, Canada
K1A 1G6
- in person — Place du Portage
Phase III, 6B1
11 Laurier Street
Gatineau, Quebec
- by email — ncr.cgsb-ongc@pwgsc.gc.ca
- on the Web — www.ongc-cgsb.gc.ca

TASK CHAIRS FOR OFFICE ENVIRONMENTS

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS
FRANÇAISE ET ANGLAISE.

Prepared by the

Canadian General Standards Board 

Approved by the

Standards Council of Canada 

Published December 2008 by the
Canadian General Standards Board
Gatineau, Canada K1A 1G6

© HER MAJESTY THE QUEEN IN RIGHT OF CANADA,
as represented by the Minister of Public Works and Government Services,
the Minister responsible for the Canadian General Standards Board, (2008).

No part of this publication may be reproduced in any form without the prior permission of the publisher.

CANADIAN GENERAL STANDARDS BOARD

COMMITTEE ON OFFICE CHAIRS

(Voting membership at date of approval)

Chairman

Deluca, G. CAF Contract Seating

General Interest Category

Comtois, M.	Micom Laboratories Inc.
Driscoll, R.	Business and Institutional Furniture Manufacturers Association
Ishag, S.	Bodycote Testing Group
Jantz, J.	Entela Laboratories Inc.
Simon, T.	Tanda Laboratories Inc.
Stables, L.	Workplace Safety and Insurance Board

Producer Category

Bouthillier, J.	Bounty Inc.
Carmona, P.	Correctional Services Canada (CORCAN)
Choo, C.	Teknion Furniture Systems
Dubuis, M.	Steelcase Inc.
Dykstra, T.	Haworth Inc.
Mascherin, E.	Dauphin Office Seating Inc.
Parratt, B.	The Global Group
Ruster, R.	Herman Miller Inc.
Turco, D.F.	Harts Upholstered Products Co Ltd.

User Category

Bach, A.	Canada Revenue Agency
Cook, B.	City of Edmonton
Denault, J.	Industry Canada
Dewling, D.	Government of Newfoundland and Labrador
Gerrard, K.	City of Toronto
Gitt, M.	Consultant
Sellers, J.	Public Works and Government Services Canada/Furniture Division

Secretary (Non-member)

Khan, R. Canadian General Standards Board

Acknowledgment is made for the translation of this National Standard of Canada by the Translation Bureau of Public Works and Government Services Canada.

CANADIAN GENERAL STANDARDS BOARD

TASK CHAIRS FOR OFFICE ENVIRONMENTS

1. SCOPE

- 1.1 This standard specifies test methods for measuring task chairs for office work environments and assessing their performance.
- 1.2 This standard also provides dimensional and adjustment requirements that respect generally accepted ergonomics guidelines such as those of CAN/CSA-ISO 9241-5-00, using NATICK/TR-89/044, 1988 as the source of anthropometric data.
- 1.3 The dimensional and adjustment requirements aim to address the estimated needs of the 5th to 95th percentile of adult office workers when in the seated position.
- 1.4 Quantities and dimensions used in this standard are given in metric units with imperial equivalents shown in brackets where appropriate. The metric units shall be regarded as official in the event of dispute.
- 1.5 This document contains requirements for chair dimensions and features that are based on the widely accepted ergonomics practices, along with the best practices and knowledge of the committee members. These dimensions and features are complex and if not specified correctly, some combinations thereof, while meeting the requirements of the standard, may result in task chairs that are inappropriate for some uses or users. It is important for the users of this standard to understand the task(s) to be performed by the chair's user along with the individual's dimensional needs when specifying dimensions and option features given in this standard.
- 1.6 The testing and evaluation of a product against this standard may require the use of materials and/or equipment that could be hazardous. This document does not purport to address all the safety aspects associated with its use. Anyone using this standard has the responsibility to consult the appropriate authorities and to establish appropriate health and safety practices in conjunction with any applicable regulatory requirements prior to its use.

2. REFERENCED PUBLICATIONS

- 2.1 The following publications are referenced in this standard:
 - 2.1.1 Canadian Standards Association (CSA)

CAN/CSA-ISO 9241-5-00: — Ergonomic Requirements for Office Work with Visual Display Terminals (VDTs)
— Part 5: Workstation Layout and Postural Requirements.
 - 2.1.2 American National Standards Institute (ANSI)/BIFMA International

ANSI/BIFMA X5.1-2002 — General-Purpose Office Chairs — Tests.
 - 2.1.3 Association for Contract Textiles (ACT)

Voluntary Performance Guidelines, January 2005.
 - 2.1.4 ASTM International

D 3574-05 — Standard Test Methods for Flexible Cellular Materials — Slab, Bonded, and Molded Urethane Foams.

- 2.1.5 BIFMA International
- CMD-1-2002 — Universal Measurement Procedure for the Use of the BIFMA Chair Measuring Device (CMD).
- 2.1.6 California Department of Consumer Affairs
- California Technical Bulletin 117, March 2000 — Requirements, Test Procedure and Apparatus for Testing the Flame Retardance of Resilient Filling Materials Used in Upholstered Furniture.
- 2.1.7 U.S. Army NATICK Research, Development and Engineering Center
- NATICK/TR-89/044, 1988 — Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics.
- 2.2 A dated reference in this standard is to the issue specified. An undated reference in this standard is to the latest issue, unless otherwise specified by the authority applying this standard. The sources are given in the Notes section.
- 3. TERMINOLOGY**
- 3.1 The definitions in BIFMA CMD-1-2002 apply in this standard.
- 4. GENERAL REQUIREMENTS**
- 4.1 **Tolerances** — Unless otherwise specified, tolerances shall be as follows:
- a. Test weights, $\pm 5\%$
 - b. Forces, velocities and time, $\pm 5\%$
 - c. Linear measurements, ± 1.5 mm (1/16 in.)
 - d. Angles, $\pm 5^\circ$
 - e. Levels, within 5 mm per metre (1/16 in. per linear foot)
 - f. Cycles, all requirements are minimums.
- 4.2 **Workmanship** — The finished task chair shall be uniform in quality, clean and free from any defects that may affect its appearance and serviceability. The external surfaces shall be smooth, and all edges shall be rounded or bevelled. All accessible surfaces shall be free from sharp edges, burrs and any other safety hazards. The upholstery shall be properly positioned, clean and well tailored in appearance. All excess upholstery material shall be neatly trimmed. Fastening devices, such as staples, shall not be visible under normal use of the task chair. The undersurface of the seat shall be finished without exposed edges.
- 4.3 **Environmental Considerations** — The task chairs should be designed, and the materials should be selected, to minimize waste and environmental impact both during the production process and in the post-consumer stages.
- The task chairs should be designed to allow the disassembly of major components to accommodate reuse or recycling of materials for which there are proven recycling markets. The metal and the plastic components of a product should be composed of recycled materials whenever possible. Where possible, all major plastic components should be identified with a composition code to facilitate recycling.
- 4.4 **Controls** — The seat height and user-adjusted chair tilt tension shall be adjustable while the user of the task chair is seated, semi-seated or standing with the task chair in the upright position. The controls for all other user-adjusted mechanisms shall be accessible by the seated user. All user-adjusted controls shall require a positive action to operate and be positioned where they cannot be activated inadvertently under normal use.
- 4.5 **Tilt mechanisms** — Task chairs shall be available with or without tilt mechanisms as specified (par. 9.1 a.). Tilt mechanisms shall be equipped with a tilt tension control.

- 4.6 **Armrests** — Task chairs shall be available with or without armrests as specified (par. 9.1 b.). When specified (par. 9.1 b.), the armrests shall be removable. Removable armrests shall be detachable using commonly available tools.
- 4.7 **Column** — The seat shall rotate independently of the base.
- 4.8 **Casters** — The casters shall be available for use on hard or carpeted surfaces as specified (par. 9.1 c.).
- 4.9 **Seat and Backrest Locks** — The seat and backrest shall be lockable in at least the chair set-up position as determined using BIFMA CMD-1-2002. Alternatively, the seat and backrest may be lockable or stoppable at multiple positions within the adjustment ranges as specified (par. 9.1 d.).
- 4.10 **Seat Height** — The seat height shall be adjustable.
5. **DETAILED REQUIREMENTS**
- 5.1 **Performance Requirements** — The task chairs shall pass the applicable tests and acceptance levels specified in ANSI/BIFMA X5.1-2002.
- 5.2 **Flammability** — All applicable components shall comply with the requirements of California Technical Bulletin 117, March 2000.
- 5.3 **Cushioning Material** — When foam-cushioning materials are used in the seat and backrest, they shall be expanded flexible urethane foam of flat slab, sculpted slab or moulded construction. These foam materials shall be tested in accordance with the specified test methods and shall comply with the requirements of Table 1.

TABLE 1
Cushioning Material

Properties	Test Method ASTM D 3574-05	Requirements	
		HR I (High Resilience) (Backrest)	HR II (High Resilience) (Seat)
Indentation force deflection (IFD) at 25% IFD, N, min.	Test B ₁ , Sections 16 to 22	89 N (20 lbf.)	106 N (24 lbf.)
Support factor, 65% IFD/25% IFD, min.	Test B ₁ , Sections 16 to 22	1.8	2.3
Dynamic fatigue test by constant force pounding, loss of force support, 40% IFD, %, max.	Test I ₃ , procedure B, Sections 95 to 103	30	20

- 5.4 **Upholstery** — When fabric is used for upholstering task chairs, it shall meet the ACT *Voluntary Performance Guidelines*, January 2005 for upholstery and shall pass the applicable testing requirements and acceptance levels. Unless otherwise specified (par. 9.1 e.), the fabric shall meet the heavy-duty rating for abrasion resistance. The Breaking Strength and Seam Slippage Tests in the ACT *Voluntary Performance Guidelines*, January 2005 do not need to be performed on three-dimensional (stretchable in all directions) knit fabric.

- 5.5. **Seat Waterfall** — When measured without compression, the vertical height of the seat front edge curve shall not be less than 40 mm (1.6 in.) and the radius of the front edge curve shall not be less than 40 mm (1.6 in.) or greater than 120 mm (4.7 in.) as shown in Figure 1.

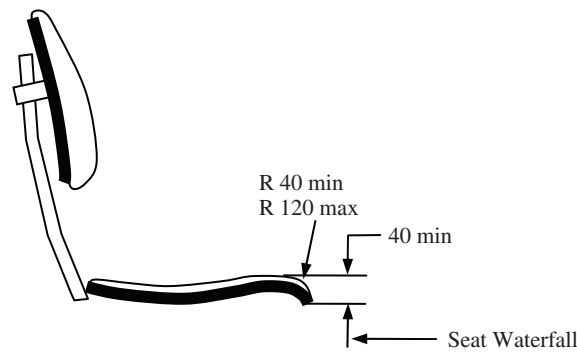


FIGURE 1
Seat Waterfall

- 5.6. **Column Clearance** — When the task chair is loaded with the chair measuring device, the clearance between the seat column and the floor shall not be less than 7 mm (0.28 in.).
- 5.7. The dimensional requirements in Section 6 shall be determined using BIFMA CMD-1-2002.
- 6. DIMENSIONAL REQUIREMENTS**
- 6.1. **Seat Width** — The seat cushion shall not be less than 450 mm (17.7 in.) wide.
- 6.2. **Backrest Width** — The backrest cushion width shall not be less than 350 mm (13.8 in.).
- 6.3. **Fixed Components**
- 6.3.1. **Seat Depth** — A fixed seat depth shall conform to one of the following classifications (par. 9.1.f):
Shallow Seat: A seat depth from 380 mm (15.0 in.) up to and including 420 mm (16.5 in.)
Medium Seat: A seat depth greater than 420 mm (16.5 in.) up to and including 460 mm (18.1 in.)
Deep Seat: A seat depth greater than 460 mm (18.1 in.).
- 6.3.2. **Backrest Height** — The top of the backrest shall not be less than 450 mm (17.7 in.).
- 6.3.3. **Armrest** (par. 9.1 g.)
- 6.3.3.1. **Armrest Height** — Fixed height armrests shall have a height in the range of 20.0 cm to 25.0 cm (7.9 in. to 9.8 in.).
- 6.3.3.2. **Armrest Length** — The total length of the armrest shall not be less than 180 mm (7.1 in.), and a minimum of 130 mm (5.1 in.) of the armrest length shall be within the armrest zone as defined in BIFMA CMD-1-2002.
- 6.3.3.3. **Armrest Setback** — The armrest setback shall be at least 100 mm (3.9 in.).
- 6.3.3.4. **Clearance Between Armrests (including armrest supports)** — The clearance between armrests shall not be less than 450 mm (17.7 in.).
- 6.3.3.5. **Armrest Width** — The armrest width shall not be less than 45 mm (1.8 in.).

- 6.3.4 **Lumbar Support Height** — The height of the lumbar support shall be between the range of 150 mm (5.9 in.) and 250 mm (9.8 in.) above the seat.
- 6.3.5 **Backrest-to-Seat Angle** — At chair set-up, the backrest-to-seat angle shall not be less than 93° or greater than 103°.
- 6.4 **Adjustable Components**
- 6.4.1 **Seat Height Adjustment Ranges** — The seat height adjustment ranges shall be classified as follows (par. 9.1 h.):
- Low Seat Height: A seat height that is adjustable from 380 mm (15.0 in.) or less to 450 mm (17.7 in.) or more.
- Standard Seat Height: A seat height that is adjustable from 419 mm (16.5 in.) or less to 510 mm (20.1 in.) or more.
- 6.4.2 **Lumbar Support Height Adjustment** — The lumbar support height shall be adjustable by at least 50 mm (2.0 in.) within the range of 150 mm (5.9 in.) to 250 mm (9.8 in.) above the seat (par. 9.1 i.).
- 6.4.3 **Armrest** (par. 9.1 j.)
- 6.4.3.1 **Armrest Height Adjustment** — For height adjustable armrests, the height shall be adjustable by at least 50 mm (2.0 in.) within the range of 176 mm to 274 mm (6.9 in. to 10.8 in.). The armrest shall be lockable in increments not greater than 15 mm (0.6 in.).
- 6.4.3.2 **Lateral Adjustment of Armrest (including armrest supports)** — The range of lateral adjustment affecting the clearance between the two armrests shall be a minimum of 50 mm (2.0 in.).
- Where the clearance between armrests is adjustable inwards or outwards, it shall include a clearance of 450 mm (17.7 in.).
- 6.4.3.3 **Horizontally Swivelling Adjustable Armrest Caps** — The armrest caps shall rotate laterally a minimum of 20° inwards and a minimum of 10° outwards.
- 6.4.4 **Seat Depth Adjustment** — The seat depth shall be adjustable by at least 50 mm (2.0 in.) within the range of 420 mm (16.5 in.) to 460 mm (18.1 in.). It shall be lockable at multiple positions within that range (par. 9.1 k.).
- 6.5 **Seat and Back Controls** — The following control requirements are mandatory only when specified in a specific application of this standard.
- 6.5.1 **Seat Pan Angle** — When specified (par. 9.1.1.), the seat pan angle shall be user-adjustable independently of the backrest to a minimum of 3° forward and 4° rearward from the horizontal position; and, at a minimum, shall be lockable at one forward position, one position near horizontal and one position backward of horizontal.
- 6.5.2 **Backrest Angle to the Horizontal** — The backrest angle shall be adjustable a minimum of 10° within a range of 93° to 113°. The backrest angle adjustment mechanism when unlocked and activated with a load shall allow the backrest to tilt rearward and when activated without a load shall allow the backrest to return to the forward position.
- 6.5.3 **Backrest-to-Seat Angle** — When the backrest-to-seat angle is adjustable, the adjustment range shall be a minimum of 10° within a range of 93 to 113° (par. 9.1m.).
- 6.5.4 **Tilt Mechanisms** — When the task chair has a tilt mechanism, it shall either allow the backrest to tilt concurrently with the seat in a ratio greater than 1:1 (so that the backrest reclines greater than 1° when the seat reclines 1°) or allow the seat and backrest to tilt in unison (a 1:1 ratio). All task chairs with tilt mechanisms shall meet the Type 1 — Tilting Chair requirements as specified in ANSI/BIFMA X5.1-2002. Task chairs that have independent seat angle adjustment or independent back angle adjustment or both, shall not be considered tilt mechanisms and are not tilting task chairs.

7. REPORTING OF TESTS — As a minimum, the test report shall include the following information:

- Title
- Name and address of the laboratory
- Unique identification of the report (such as serial number)
- Name and address of the client (where applicable)
- Series
- Model number
- Description and unambiguous identification of the test item
- Characterization and condition of the test item
- Date of receipt of the test item
- Date(s) of the performance of test
- Identification of the test methods used
- Any additions to, deviations from, or exclusions from the test method (such as environmental conditions)
- Signature and title, or an equivalent identification of the person(s) accepting responsibility for the content of the report
- Date of issue of the report
- Test results, including all relevant test data, diagrams, charts and photographs
- Statement that the certificate or report shall not be reproduced except in full without the written approval of the laboratory.

8. PREPARATION FOR DELIVERY

- 8.1 **Preparation for Delivery** — Unless otherwise specified (par. 9.1 n.), preparation for delivery shall conform to normal commercial practice.
- 8.2 **Marking** — The task chair shall be permanently and legibly marked on the undersurface of the seat with the manufacturer's name or recognized trademark and the product number.
- 8.3 **Labelling** — When the textile labelling legislation¹ of the government applies to textile component parts of task chairs, users of this standard should ensure that they are in compliance with the requirements of the legislations.

9. NOTES

- 9.1 **Options** — The following options must be specified in the application of this standard:
- a. Whether task chairs are available with or without tilt mechanisms (par. 4.5)
 - b. Whether the task chairs are available with or without armrests (par. 4.6). Whether the armrests are removable (par. 4.6)
 - c. Whether the casters are for hard surfaces or carpeted floors (par. 4.8)

¹ In Canada, the legislation that applies are those of the federal or provincial government.

- d. Whether the seat and backrest are lockable in the set-up position or lockable or stoppable at multiple positions (par. 4.9)
- e. Whether the fabric used to upholster the task chair shall meet other than the specified heavy-duty rating for abrasion resistance (par. 5.4)
- f. If fixed, whether shallow or medium or deep seat depth is required (par. 6.3.1)
- g. Whether the armrests are fixed (par. 6.3.3)
- h. Whether low or standard seat height adjustment range is required (par. 6.4.1)
- i. Whether the lumbar support is height adjustable (par. 6.4.2)
- j. Whether the armrests are adjustable (par. 6.4.3)
- k. Whether the task chairs are available with adjustable seat depth (par. 6.4.4)
- l. Whether the seat pan angle is user-adjustable independently of the backrest (par. 6.5.1)
- m. Whether the backrest-to-seat angle is adjustable (par. 6.5.3)
- n. Preparation for delivery if other than normal commercial practice (par. 8.1).

9.2 **Operating Instructions** — Task chairs shall be provided with pictorial or written instructions or both and in both official languages of Canada.

9.3 **Other Related Publications**

Canadian Standards Association (CSA)

CSA-Z412 — Guidelines on Office Ergonomics.

10. **Sources of Referenced Publications**

The following addresses were valid at the date of publication.

- 10.1 The publications referenced to in par. 2.1.1 and 9.3 may be obtained from the Canadian Standards Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, telephone 416-747-4044 or 1-800-463-6727, fax 613-747-2510, e-mail sales@csa.ca, Web site www.csa.ca.
- 10.2 The publication referred to in par. 2.1.2 may be obtained from the American National Standards Institute, 25 West 43rd Street, New York, NY 10036, U.S.A., telephone 1-212-642-4980, fax 1-212-398-0023, Web site www.ansi.org, or from BIFMA International, 2680 Horizon Drive SE, Suite A-1, Grand Rapids, MI 49546-7500, U.S.A., telephone 1-616-285-3963, fax 1-616-285-3765, e-mail email@bifma.org, Web site www.bifma.com.
- 10.3 The publication referred to in par. 2.1.3 may be obtained from the Association for Contract Textiles, P.O. Box 101981, Fort Worth, TX 76185, U.S.A., telephone 1-817-924-8048, fax 1-817-924-8050, e-mail, Web site www.contracttextiles.org.
- 10.4 The publications referred to in par. 2.1.4 may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, U.S.A., telephone 1-610-832-9500, Web site www.astm.org, or from IHS Canada, 1 Antares Drive, Suite 200, Ottawa, Ontario K2E 8C4, telephone 613-237-4250 or 1-800-267-8220, fax 613-237-4251, e-mail gic@ihscanada.ca, Web site canada.ihs.com.
- 10.5 The publication referred to in par. 2.1.5 may be obtained from BIFMA International, 2680 Horizon Drive, SE, Ste A-1, Grand Rapids, MI 49546-7500, U.S.A., telephone 1-616-285-3963, fax 1-616-285-3765, e-mail@bifma.org, Web site www.bifma.org.

- 10.6 The publication referred to in par. 2.1.6 may be obtained from the State of California, Department of Consumer Affairs, Bureau of Home Furnishings and Thermal Insulation, 3485 Orange Grove Avenue, North Highland, CA 95660-5595, U.S.A., Web site www.dca.ca.gov.
- 10.7 The publication referred to in par. 2.1.7 may be obtained from the U.S. Army NATICK Research, Development and Engineering Center, Natick, MA 01760-5000, U.S.A.

WITHDRAWN