



## WITHDRAWAL

March 2019

### Selected standards in the series Textiles

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## RETRAIT

Mars 2019

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## **CAN/CGSB-4.2**

### Textile test methods

#### **No. 0-2001**

Moisture regain values, SI units used in CAN/CGSB-4.2 and fibre, yarn, fabric, garment and carpet properties (ICS 59.080.01)

#### **No. 1-M87**

Precision and accuracy of measurements (ICS 59.080.01)

#### **No. 2-M88**

Conditioning textile materials for testing (ICS 59.080.01)

#### **No. 3-M88**

Determination of moisture in textiles (ICS 59.080.01)

#### **No. 5.1-M90**

Unit mass of fabrics (ICS 59.080.30)

#### **No. 9.1-M90**

Breaking strength of fabrics — Strip method — Constant-time-to-break principle (ICS 59.080.30)

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### Méthodes pour épreuves textiles

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Valeurs de reprise d'humidité, unités SI utilisées dans CAN/CGSB-4.2 et propriétés des fibres, fils, tissus, articles d'habillement et tapis (ICS 59.080.01)

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**No. 21-M90**

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**No. 22-2004**

Colourfastness to rubbing (crocking) (ICS 59.080.01)

**No. 24-2002**

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**No. 25.1-97**

Dimensional change in wetting (ICS 59.080.01)

**N° 11.1-94**

Résistance à l'éclatement — Essai à l'éclatomètre à membrane (ICS 59.080.30)

**N° 11.2-M89**

Résistance à l'éclatement — Essai d'éclatement à la bille (ICS 59.080.30)

**N° 15-2003**

Matières non fibreuses sur les textiles (ICS 59.080.01)

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**N° 20-M89**

Solidité de la couleur à l'eau (ICS 59.080.01)

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Solidité de la couleur au frottement (Dégorgement par frottement) (ICS 59.080.01)

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Air permeability (ICS 59.080.01)

**No. 57-M90**

Determination of maximum safe ironing temperature (ICS 59.080.01)

**N° 33-94**

Méthodes de pressage (ICS 59.080.30)

**N° 36-M89**

Perméabilité à l'air (ICS 59.080.01)

**N° 57-M90**

Détermination de la température maximale de repassage (ICS 59.080.01)



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**CAN/CGSB-4.2**

**No. 25.1-97**

**Supersedes CAN/CGSB-4.2**

**No. 25.1-M90**

**Reaffirmed**

**November 2013**

# **Textile test methods**

## **Dimensional change in wetting**

ICS 59.080.01

Withdrawn



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**NATIONAL STANDARD OF CANADA**

**CAN/CGSB-4.2**  
**No. 25.1-97**

Supersedes CAN/CGSB-4.2  
No. 25.1-M90  
Reaffirmed  
November 2013

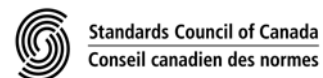
**Textile test methods**  
**Dimensional change in wetting**

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

Prepared by the

**Canadian General Standards Board** 

Approved by the



Published September 1997 by the  
**Canadian General Standards Board**  
Gatineau, Canada K1A 1G6

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



**CAN/CGSB-4.2**  
**No. 25.1-97**


Supersedes CAN/CGSB-4.2  
No. 25.1-M90  
Reaffirmed  
November 2013

**Preface to the National Standard of Canada**

This National Standard of Canada has been reaffirmed by the CGSB Committee on Textile Test Methods and Terminology. Editorial changes have been made by the correction of the following paragraph:

- 8.1 The publications referred to in par. 3.1.1 may be obtained from the Canadian General Standards Board, Sales Centre, Gatineau, Canada K1A 1G6. Telephone 819-956-0425 or 1-800-665-2472. Fax 819-956-5740. E-mail [ncr.cgsb-ongc@tpsgc-pwgsc.gc.ca](mailto:ncr.cgsb-ongc@tpsgc-pwgsc.gc.ca). Web site [www.tpsgc-pwgsc.gc.ca/ongc-cgsb](http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb).

Withdrawn

 Ottawa Canada K1A 1G6	<b>TEXTILE TEST METHODS</b>	<b>CAN/CGSB-4.2</b>
	<b>Dimensional Change in Wetting</b>	<b>No. 25.1-97</b>

Supersedes CAN/CGSB-4.2  
No. 25.1-M90  
Reaffirmed  
November 2013

## 1. PURPOSE AND SCOPE

- 1.1 This method determines, in a single treatment, the dimensional changes (shrinkage or stretch) that may occur in a fabric as a result of relaxation of strain, during any of the following treatments:
- commercial preshrinking of wool or part-wool fabrics (sponging)
  - dry cleaning in solvent systems containing dissolved water<sup>1</sup>
  - pressing involving moisture
  - wet cleaning involving wetting of the fabric with an aqueous detergent solution followed by gentle hand brushing to remove soil and gentle hand rinsing.
- 1.2 The testing and evaluation of a product against this method 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 method 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. PRINCIPLE

- 2.1 Specimens of fabric, with known distances marked on them, are soaked in water containing a wetting agent. Excess water is removed, the specimens are air-dried on a flat surface, pressed (if applicable), the marked distances remeasured and the dimensional changes calculated.
- 2.2 Provision is also made for subjecting the specimens to tension pressing to determine whether any excessive shrinkage that may have occurred is restorable by dampening the specimens with water and pressing under tension.

## 3. REFERENCED PUBLICATIONS

- 3.1 The following publications are referenced in this method:
- 3.1.1 Canadian General Standards Board (CGSB)  
CAN/CGSB-4.2 — Textile Test Methods:
- No. 1 — Precision and Accuracy of Measurements
  - No. 2 — Conditioning Textile Materials for Testing
  - No. 33 — Methods of Pressing.
- 3.2 A reference to a regulation is always to the latest issue. A dated reference is to the issue specified. An undated reference is to the latest issue (including amendments), unless otherwise specified by the authority applying this method. The sources are given in the Notes section.

<sup>1</sup> Experience has shown that this method for dimensional change in wetting gives good correlation with the dimensional change due to relaxation of fabric strains in repeated dry cleanings.

#### 4. APPARATUS AND REAGENTS

- 4.1 **Template:** for marking out distances on specimen.
- 4.2 **Steel tape measure or ruler:** graduated in millimetres.
- 4.3 **Container:** at least 380 × 380 × 25 mm deep.
- 4.4 **Neutral nonionic wetting agent.**<sup>2</sup>
- 4.5 **Hydroextractor, blotting paper or other absorbent material.**
- 4.6 **Smooth flat surface:** for drying specimens.
- 4.7 **Hot-head flat-bed press, hand iron and ironing board, or steam press:** in accordance with CAN/CGSB-4.2 No. 33.
- 4.8 **Tension presser:** in accordance with CAN/CGSB-4.2 No. 33.

#### 5. TEST SPECIMENS

- 5.1 Cut two specimens<sup>3</sup> each at least 350 × 350 mm and having different warp and weft yarns (or different wales and courses) from an area of the fabric that is free from wrinkles and creases. Condition the specimens in accordance with CAN/CGSB-4.2 No. 2 and place them on a flat surface. Using a permanent marking medium (e.g. indelible ink, sewing thread), mark on each specimen three accurately measured distances of at least 250 mm, parallel to the warp, wales or machine direction, and three parallel to the weft, courses or cross direction. The three marked distances shall be at least 100 mm apart, and no portion of them shall be closer than 50 mm to the specimen edges.
- 5.2 When tension pressing is required, prepare the specimens according to CAN/CGSB-4.2 No. 33.

#### 6. PROCEDURE

##### 6.1 With Tensionless Pressing

- 6.1.1 Immerse the specimens for at least 1 h in water at 25 to 30°C to which has been added 0.5 g/L of a neutral nonionic wetting agent to facilitate rapid wetting-out of the fabric.
- 6.1.2 Gather each specimen separately into a ball to prevent distortion in handling, remove it from the soaking bath and transfer it to the hydroextractor, placing it against the wall of the extractor basket. Where a large number of specimens are being processed together, transfer each one separately and place it as close as possible to the wall, to prevent entanglement and distortional strains during centrifuging. Centrifuge for 10 s at full speed or until the flow of water from the extractor has markedly decreased. Carefully remove each specimen and spread without tension or distortion on a smooth flat surface. Allow the specimen to dry at room temperature. As an alternative to centrifuging, the specimen may be laid on a smooth flat surface, excess moisture removed by blotting, and the specimen allowed to dry at room temperature.
- 6.1.3 **Pressing** — Except where pressing is excluded (e.g. by a specification, label or the nature of the material), press the specimen according to CAN/CGSB-4.2 No. 33 using a procedure suitable for the type of fabric.
- 6.1.4 Place the specimen on a flat surface and condition it in accordance with CAN/CGSB-4.2 No. 2 for at least 4 h.
- 6.1.5 Remeasure the marked distances.

<sup>2</sup> Triton-X100 has been found suitable for this purpose and is available from Fisher Scientific Ltd., 112 Colonnade Road, Nepean, Ontario K2E 7L6, telephone 1-800-234-7437, and from Union Carbide Canada Ltd., 7400, Les Galeries d'Anjou Boulevard., Suite 360, Anjou, Montreal, Quebec H1M 3M2, telephone 1-800-361-4227.

<sup>3</sup> If the precision with which the dimensional change in wetting to be determined is specified, refer to CAN/CGSB-4.2 No. 1 to determine the number of test specimens required. If this is not known, at least two specimens shall be tested.

6.1.6 Calculate the average dimensional change, for each direction of the fabric separately, as a percentage of the original measurement to the nearest 0.1%.

6.1.7 Average the results for the two specimens.

## 6.2 Restorability by Tension Pressing

6.2.1 If after the tensionless pressing procedures (par. 6.1) excessive shrinkage is found in one or both directions of the fabric, the specimen shall, if required, be subjected to tension pressing according to CAN/CGSB-4.2 No. 33.

6.2.2 Place the specimen on a flat surface and condition it in accordance with CAN/CGSB-4.2 No. 2 for at least 4 h.

6.2.3 Remeasure the marked distances.

6.2.4 Calculate the average dimensional change, for each direction of the fabric separately, as a percentage of the original measurement (i.e. before wetting) to the nearest 0.1%.

6.2.5 Average the results for the two specimens.

## 7. REPORT

Report the following information:

7.1 The average percent dimensional change, after tensionless pressing, for each direction of the fabric separately, to the nearest 0.1%, using a negative sign for shrinkage and a plus sign for stretch.

7.2 If applicable, the percent dimensional change after tension pressing, for each direction of the fabric separately, to the nearest 0.1%.

7.3 The number and date of issue of this method (including amendments).

## 8. NOTES

8.1 The publications referred to in par. 3.1.1 may be obtained from the Canadian General Standards Board, Sales Centre, Ottawa, Canada K1A 1G6. Telephone (819) 956-0425 or 1-800-665-CGSB (Canada only). Fax (819) 956-5644.

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