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Series 4
Série des 4

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. 4.5-M86

Retail packages of yarn — Determination of mass (ICS 59.080.20)

No. 5.2-M87

Linear density of yarn in SI units (ICS 59.080.20)

No. 9.2-M90

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

No. 9.3-M90

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

No. 9.4-M91

Breaking strength of yarns — Single strand method (ICS 59.080.20)

No. 9.5-M89

Breaking strength of yarns — Skein method (ICS 59.080.20)

No. 9.6-93

Breaking strength of nonwoven textiles (ICS 59.080.30)

CAN/CGSB-4.2

Méthodes pour épreuves textiles

N° 4.5-M86

Bobines de fil vendues au détail — Détermination de la masse (ICS 59.080.20)

N° 5.2-M87

Masse linéique du fil en unités SI (ICS 59.080.20)

N° 9.2-M90

Résistance à la rupture des tissus — Méthode d'arrachement — Principe de rupture à temps constant (ICS 59.080.30)

N° 9.3-M90

Résistance à la rupture des tissus de haute résistance — Principe de rupture à temps constant (ICS 59.080.30)

N° 9.4-M91

Résistance à la rupture des fils — Méthode à fil simple (ICS 59.080.20)

N° 9.5-M89

Résistance à la rupture des fils — Méthode de l'écheveau (ICS 59.080.20)

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Résistance à la rupture des non-tissés (ICS 59.080.30)

No. 10-M87

Elongation (ICS 59.080.30)

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Colourfastness to perspiration
(ICS 59.080.01)

No. 25.2-M89

Dimensional change of textile fabrics to
open-head steaming (ICS 59.080.30)

No. 26.1-M88

Water resistance — Static head
penetration test (ICS 59.080.01)

No. 26.5-M89

Water resistance — High-pressure
penetration test (ICS 59.080.30)

No. 28.2-M91

Resistance to micro-organisms — Surface-
growing fungus test — Pure culture
(ICS 59.080.01)

No. 28.4-M91

Resistance to micro-organisms — Fungus
damage test — Pure culture — Qualitative
(ICS 59.080.01)

No. 30.1-M89

Effect of solvents on the permanence of
textile finishes (ICS 59.080.01)

No. 32.1-98

Resistance of woven fabrics to seam
slippage (ICS 59.080.01)

N° 10-M87

Allongement (ICS 59.080.30)

N° 23-M90

Solidité de la couleur à la sueur
(ICS 59.080.01)

N° 25.2-M89

Changement dimensionnel des textiles à
l'aide d'une presse à plateau inférieur
vaporisant (ICS 59.080.30)

N° 26.1-M88

Résistance à l'eau — Essai de
pénétration sous pression constante
(ICS 59.080.01)

N° 26.5-M89

Résistance à l'eau — Essai de
pénétration à haute pression
(ICS 59.080.30)

N° 28.2-M91

Résistance aux micro-organismes —
Essai par fungus se propageant en
surface — En culture pure
(ICS 59.080.01)

N° 28.4-M91

Résistance aux micro-organismes —
Évaluation des dommages causés par
fungus — En culture pure — Qualitative
(ICS 59.080.01)

N° 30.1-M89

Effet des solvants sur la permanence des
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(ICS 59.080.01)

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N° 37-2002

Épaisseur des tissus (ICS 59.080.30)

N° 42-M91

Teneur en cuivre des textiles (ICS 59.080.01)

N° 45-M88

Étoffes — Détermination de l'auto-défroissabilité d'un spécimen plié horizontalement par mesurage de l'angle rémanent après pliage (ICS 59.080.01)

N° 49-99

Résistance des textiles à la diffusion de vapeur d'eau (ICS 59.080.01)

N° 55-M90

Perte de résistance et changement de couleur des tissus causés par la rétention de chlore (ICS 59.080.01)

N° 56.1-M87

Évaluation de l'extension unidirectionnelle et de la récupération dimensionnelle des tissus élastiques (ICS 59.080.30)

N° 60-M89

Résistance aux accrocs — Essai à la masse (ICS 59.080.01)

N° 65-M91

Détermination de la résistance du liage des tissus contre-collés, stratifiés et thermocollés (ICS 59.080.10)

No. 66-M91

Dimensional change and appearance after dry cleaning of coated, bonded, laminated and fused fabrics (ICS 59.080.40)

No. 69-M91

Weather resistance — Xenon arc radiation (ICS 59.080.10)

No. 78.1-2001

Thermal protective performance of materials for clothing (ICS 59.080.01)

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Flammability of soft floor coverings — Sampling plans (ICS 59.080.60)

CAN/CGSB-4.158-75

Designation of yarns (ICS 59.080.20)

CAN/CGSB-4.159-75

Universal system for designating linear density (Tex system) (ICS 59.080.20)

CAN/CGSB-4.160-75

Integrated conversion table for replacing traditional yarn numbers by rounded values in the Tex system (ICS 59.080.20)

N° 66-M91

Évaluation du changement dimensionnel et de l'aspect des tissus enduits, contre-collés, stratifiés et thermocollés à la suite de nettoyages à sec (ICS 59.080.40)

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N° 78.1-2001

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Résistance à l'inflammation des revêtements de sol mous — Plans d'échantillonnage (ICS 59.080.60)

CAN/CGSB-4.158-75

Désignation des fils (ICS 59.080.20)

CAN/CGSB-4.159-75

Système universel de désignation de la masse linéique (système Tex) (ICS 59.080.20)

CAN/CGSB-4.160-75

Table générale de conversion pour le remplacement des titres traditionnels des fils par des valeurs arrondies du système Tex (ICS 59.080.20)



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CAN/CGSB-4.2

No. 37-2002

Supersedes CAN/CGSB-4.2

No. 37-M87

Reaffirmed

November 2013

Textile test methods

Fabric thickness

ICS 59.080.30

Withdrawn



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NATIONAL STANDARD OF CANADA

CAN/CGSB-4.2
No. 37-2002


Supersedes CAN/CGSB-4.2
No. 37-M87
Reaffirmed
November 2013

Textile test methods

Fabric thickness

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

Prepared by the
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Approved by the
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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.

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 addition and correction of the following paragraphs:

- 1.2 The testing and evaluation of a product against this method may require the use of materials and equipment that could be hazardous. This method 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.

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 Ottawa Canada K1A 1G6	TEXTILE TEST METHODS	CAN/CGSB-4.2
	Fabric Thickness	No. 37-2002

Supersedes CAN/CGSB-4.2
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FOREWORD

This method is similar to International Standard ISO 5084, Textiles — Determination of thickness of textiles and textile products. The sizes of the pressor feet required by the ISO Standard are not in agreement with North American test equipment.

1. PURPOSE AND SCOPE

- 1.1 This method measures the thickness of textile fabrics as determined between parallel plane surfaces under an arbitrary pressure. Since all textile fabrics are compressible, the thickness measured will depend upon the pressure applied.

2. PRINCIPLE

- 2.1 The fabric is subjected to compression between two parallel plane surfaces whose perpendicular separation is taken to the thickness of the fabric at the pressure applied.

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.

- 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.

4. APPARATUS

- 4.1 The instrument used for the determination of thickness of fabrics shall be capable of measurement to the nearest 0.03 mm. It shall be equipped with a presser foot, not less than 25 mm in diameter, for use with tightly woven (relatively noncompressible) materials with a fine or tight weave or knit structure, and with a second presser foot, not less than 75 mm in diameter, for use with napped or pile (easily compressible) and loosely woven or open knit materials.¹
- 4.2 The instrument shall be capable of applying pressures ranging from 0.007 to 10 kPa on the smaller foot, and from 0.007 to 1.0 kPa on the larger foot. These pressures shall in each case be known with an error not greater than $\pm 2\%$.

¹ Recommended minimum presser foot areas and corresponding diameters:

Area (cm ²)	Diameter (mm)
5	25.23 \pm 0.03
50	79.8 \pm 0.1

The surfaces of the presser feet and the reference plate of the instrument shall be both plane and parallel within 0.025 mm.

5. TEST SPECIMEN

- 5.1 The specimen may be of any size provided its minimum dimension is at least 12 mm greater than the diameter of the presser foot used.

6. PROCEDURE

- 6.1 Condition the specimen in accordance with CAN/CGSB-4.2 No. 2 before testing.
- 6.2 Place the specimen upon the anvil of the instrument, flat, but without tension. Lower the presser foot onto the fabric without impact until the specified pressure is established, and allow it to remain at this pressure for 30 s. Unless otherwise selected, an applied pressure of $1 + 0.01$ kPa is recommended.
- 6.3 Raise the presser foot and position the sample or test specimen, without tension or distortion, on the reference plate so that no part of the area to be measured is closer than 50 mm of the selvage unless the material is less than 500 mm wide, in which case measurements may not be taken nearer to the selvage than one tenth of the width of the material. Ensure that the area chosen for the test is free from creases. Note the reading of the thickness gauge. Lift the foot and make similar observations at not fewer than five different places on the fabric, chosen so as to represent the entire sample.² No measurement shall be made, however, within 50 mm of the selvage unless the material is less than 500 mm wide, in which case measurements may not be taken nearer to the selvage than one tenth of the width of the material. The specimen shall not be allowed to overhang the edges of the anvil unless additional means of support are provided to prevent arching or bowing of the specimen above the anvil.
- 6.4 Lower the presser foot gently onto the specimen until the selected pressure is established and note the gauge reading after 30 ± 5 s.
- 6.5 Determine, in accordance with the procedure in par. 6.3 and 6.4, the thickness of at least five different areas on the sample or at least five test specimens.²

7. CALCULATION

- 7.1 Determine the thickness of the fabric as measured in accordance with par. 6.5. Take the mean of the five results as the thickness of the material.³

8. REPORT

Report the following information:

- 8.1 The average value obtained from at least five readings taken at the selected pressure.
- 8.2 The selected pressure.
- 8.3 The size of the presser foot used.
- 8.4 The number of this method: CAN/CGSB-4.2 No. 37-2002.

9. NOTES

- 9.1 **Source of Referenced Publications** — 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.

² If the precision with which thickness is to be determined is specified, refer to CAN/CGSB-4.2 No. 1 to determine the number of measurements required. If this is not known, at least five measurements shall be made.

³ The average result for the determinations made is an estimate of the true average for the material under test. A measure of the reliability of this estimate can be obtained by determining the confidence interval (CAN/CGSB-4.2 No. 1, par. 6.2) within which the true mean will lie for any given probability.