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WITHDRAWAL

January 2021

Selected standard in the series Textiles

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CAN/CGSB-4.2

Textile test methods

27.6-2015

Textile Test Methods – Flame Resistance – Methenamine Tablet Test for Textile Floor Coverings (ICS 59.080.30)

CAN/CGSB-4.2

Méthodes pour épreuves textiles

27.6-2015

Méthodes pour épreuves textiles : résistance à l'inflammation - Essai à la tablette de méthénamine des revêtements de sol textiles (ICS 59.080.30)



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No. 27.6-M91

Textile test methods

Flame resistance — Methenamine tablet test for textile floor coverings

ICS 59.080.30



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Textile test methods

Flame resistance — Methenamine tablet test for textile floor coverings

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¹ General interest

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Withdrawn

Textile test methods

Flame resistance — Methenamine tablet test for textile floor coverings

1 Scope

This method determines the flammability of finished textile floor covering materials when exposed to an ignition source (methenamine tablet) under specified conditions.

This method is applicable to all types of textile floor coverings, regardless of fibre type or method of construction.

This method describes the testing of a single specimen and is to be used in conjunction with a statistically valid sampling plan.

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

A specimen of the finished textile floor covering is conditioned, dried, brought to room temperature, and placed horizontally in a test chamber in a draft-free environment. A methenamine tablet is placed in the centre of the specimen, ignited, and the shortest distance between the charred area of the floor covering and the inside edge of the specified frame is measured.

3 Normative references

The following normative document contains provisions that, through reference in this text, constitute provisions of this method. The referenced document may be obtained from the source noted below.

NOTE The address provided below was valid at the date of publication of this method.

An undated reference is to the latest edition or revision of the reference or document in question, unless otherwise specified by the authority applying this method. A dated reference is to the specified revision or edition of the reference or document in question.

3.1 Canadian General Standards Board (CGSB)

CAN/CGSB-4.2 — *Textile test methods:*

No. 2 — *Conditioning textile materials for testing.*

3.1.1 Source

The above 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. Email ncr.cgsb-ongc@tpsgc-pwgsc.gc.ca. Web site www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html.

4 Apparatus and reagents

4.1 Test chamber: a box, made from hard, fire-resistant insulation board at least 6 mm thick with similar thermal properties as inorganic-cement board, open at the top with all joints tightly sealed, with inside dimensions of 300 mm \pm 10 mm x 300 mm \pm 10 mm x 300 mm \pm 10 mm. A mirror mounted at an angle above the test chamber will assist in viewing the test specimen.

4.2 Secondary floor: a rigid, removable, hard, fire-resistant insulation board made of the same material as the test chamber, and measuring approximately 280 mm x 280 mm x 3 mm to fit the inside bottom of the test chamber.

4.3 Frame: a steel plate, 230 mm \pm 5 mm x 230 mm \pm 5 mm x 6 mm \pm 1 mm, with a 203 mm \pm 0.5 mm diameter hole in the centre.

4.4 Centring device: an instrument used to centre the methenamine tablet on the specimen.

NOTE A half-circle template fitting the diameter of the frame with a half-circle hole of approximately 7 mm diameter at the centre of the base may be used (see Figure 1).

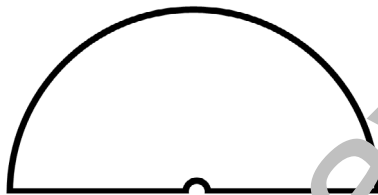


Figure 1 — Example of a centring device

4.5 Methenamine timed burning tablet²: a white, round, bevelled tablet with a nominal diameter of 6.35 mm, a weight of 149 mg \pm 5 mg and a burning time of 13 s \pm 13 s.

The tablet shall be stored in a desiccator over a desiccant for at least 24 h prior to use, to prevent cracking on ignition. The tablet shall be handled only by mechanical means.

NOTE The burning time of the tablet is the duration of the flaming when the tablet is tested on a metal burn plate under standard laboratory conditions in a draft-free environment.

4.6 Desiccator: a cabinet with shelves capable of holding 230 mm x 230 mm specimens separately in a horizontal position.

4.7 Desiccant: anhydrous magnesium perchlorate or equally effective dehydrating agent.

4.8 Laboratory drying oven: an oven with a forced draft capable of maintaining a temperature of 105°C \pm 2°C.

4.9 Glove: nonhygroscopic, made of polyethylene.

4.10 Steel rule: graduated in millimetres.

4.11 Vacuum cleaner: household, with dust brush attachment.

4.12 Ignition source: match or lighter.

² A tablet that conforms to these specifications is available from Vesta Pharmaceuticals, Inc., 5767 Thunderbird Road, Indianapolis, IN 46236, U.S.A. Telephone 317-895-9000. Website <http://www.vestapharm.com/methenamine>.

5 Test specimens

5.1 Cut specimens to a minimum of 230 mm x 230 mm, ensuring they are free from creases, delamination, or other distortion. The number of specimens to be tested shall be based on a statistically valid sampling plan.

NOTE CAN/CGSB-4.155 represents a statistically valid sampling plan consisting of a minimum of ten specimens.

5.2 Use the vacuum cleaner to ensure the surface is free of lint, loose yarns, fibres, etc.

6 Procedure

6.1 Condition the specimen in accordance with CAN/CGSB-4.2 No. 2.

NOTE Standard conditioning before drying is specified because storage conditions may cause some materials to be moist, and thus require considerably more than 2 h of drying time.

6.2 Place the conditioned specimen in an oven at $105^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 2 h \pm 1 min, ensuring free access of air on all sides.

6.3 Remove the specimen from the oven and immediately place in the desiccator with the desiccant for a minimum of 1 h or until it reaches room temperature, ensuring that the specimen is horizontal with the pile side (or traffic surface) up. If more than one specimen is placed in the desiccator at a time, ensure specimens do not overlap.

6.4 Place the test chamber in a draft-free location. Use of a laboratory fume hood, with all exhausts turned off and the door closed, is recommended.

6.5 Remove the specimen from the desiccator. If applicable, ensure the pile is in an upright position by gently brushing against the lay with a gloved hand. Place the specimen horizontally on the secondary floor of the test chamber with the pile side (or traffic surface) up. Centre the steel frame on top of the specimen.

6.6 Using the centring device, place a methenamine tablet horizontally in the centre of the specimen. Care should be taken to not distort or flatten the pile when using the centring device to place the tablet. For a specimen with an irregular, high pile, ensure the tablet does not fall between the yarns.

6.7 Ignite the tablet by carefully bringing an ignition source in contact with the top of the tablet; do not allow the ignition source to come in contact with the specimen. If more than 2 min elapse between removal of the specimen from the desiccator and ignition of the tablet, repeat steps 6.1 to 6.6. If a major fracture of the tablet occurs, consider the test result void and repeat steps 6.1 to 6.7 with a new specimen.

6.8 Terminate the test when flaming and glowing cease, or when combustion reaches any point on the inside edge of the frame. Evacuate fumes from the test chamber. Without shifting the frame on the specimen, remove the secondary floor, frame, and specimen from the test chamber.

6.9 Measure the shortest distance between the charred area and the inside edge of the steel frame, to the nearest millimetre. The charred area includes blackened or burned fibres; melted areas are not considered.

6.10 Remove any residue from the secondary floor that would prevent the next specimen from being tested in a horizontal plane.

6.11 Allow sufficient time between tests for the secondary floor and test chamber to cool to room temperature.

7 Report

Report the following information:

- 7.1** The type of sampling plan used and the number of specimens tested.
- 7.2** The shortest distance between the charred area and the inside edge of the steel frame for each specimen tested, reported to the nearest millimetre.
- 7.3** The number of this method: CAN/CGSB-4.2 No. 27.6-2015.

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