GM WORLDWIDE ENGINEERING STANDARDS	Test Procedure	GMW3347

Lint Pickup and Retention of Textile Materials

1 Introduction

Note: Nothing in this standard supercedes applicable laws and regulations.

Note: In the event of conflict between the English and domestic language, the English language shall take precedence.

1.1 Purpose. This test procedure is used to determine the resistance to lint pickup and retention of automotive fabrics.

1.2 Applicability. This test procedure is applicable to automotive seating fabrics primarily those of a pile construction. It can be used on other fabric construction types at the discretion of the approving GM Materials Engineer.

1.3 Remarks. Lint pickup and retention is simulated on a laboratory testing machine by a random rubbing action produced by tumbling three (3) specimens with a small amount of cotton fiber in a cylindrical test chamber lined with a mildly abrasive material. After testing, one (1) specimen is evaluated for lint pickup. After vacuuming the remaining two (2) specimens, the retained lint observed is reported using an arbitrary rating scale.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW3221

2.3 Additional References.

- 02-2530-00 – Egyptian Karnak fiber.
- Atlas Electric Devices Co., 4114 N. Ravenswood Ave., Chicago, IL 60613-1786.(www.atlas-mts.com)

3 Resources

3.1 Facilities.

3.1.1 Calibration. The test facilities and equipment shall be in good working order and shall have a valid calibration label.

3.1.2 Alternatives. Alternative test facilities and equipment may also be used. However, all measuring variables as specified in this standard shall be determined correctly with respect to their physical definition.

3.2 Equipment.

3.2.1 Random Tumble Pilling Tester with the following accessories:

3.2.2 Air injection device to give 17.5 kPa ± 3.5 kPa in each test chamber either included in new testers or a modification to older testers.

3.2.3 Cork cylinder liners 146 mm ± 1 mm by 452 mm ± 1 mm cut from 1.5 mm ± 0.25 mm thick flat sheet. The original surface of the liner, produced by slicing the material, should be used without any further treatment such as sanding.

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3.2.4 Cotton sliver, 5300 tex fine Egyptian Karnak gray colored fiber such as Atlas No. 02-2530-00 or equivalent.

Note: Tester and accessories are available from Atlas Electric Devices Co., 4114 N. Ravenswood Ave., Chicago, IL 60613-1786.

3.2.5 Vacuum cleaner, canister type, with a soft brush attachment.

Note: Vacuum used with the Taber test machine at the highest power setting possible is acceptable. The soft brush attachment shall have approximately 45 mm long bristles.

3.2.6 Apparatus for conditioning to the appropriate requirements as described in GMW3221 Code A, unless otherwise specified in the relevant materials specification.

3.2.7 Double coated tape used to adhere the cork liners to the test chambers.

3.2.8 Isopropyl alcohol and clean white cloth used to clean the blades and chambers.

3.2.9 Die or template and scissors used to cut the test specimens.

3.2.10 Stapler used to prepare the test specimens.

3.3 Test Vehicle/Test Piece. Not applicable.

3.4 Test Time.

Calendar time:	1 day
Test hours:	0.5 hour
Coordination hours:	0.5 hour

3.5 Test Required Information. Not applicable.

3.6 Personnel/Skills. Personnel trained in accordance with the laboratory accreditation and Standard Operating Procedure requirements

4 Procedure

4.1 Preparation.

4.1.1 Unless otherwise specified in the relevant material specification, conditioning shall be performed according to GMW3221 Code A. Condition test specimens and the cork liners.

4.1.2 Cut four (4) test specimens, each 105 mm ± 1 mm by 105 mm ± 1 mm in size along the bias direction (45 degree angle to warp). Take one (1) test specimen and fold, face out, two (2) diagonally opposite corners together. Overlap the corners, back to face, and staple together. Repeat with the remaining two (2) corners. Repeat the folding procedure with two (2) of the remaining cut test specimens (total of three (3)). The fourth test specimen will be used as a **control.**

4.2 Conditions.

4.2.1 Environmental Conditions. Testing shall be conducted in a room complying with GMW3221 standard conditions.

4.2.2 Test Conditions. Deviations from the requirements of this standard shall have been agreed upon. Such requirements shall be specified on component drawings, test certificates, reports, etc.

4.3 Instructions.

4.3.1 Fit a conditioned cork liner around the inner surface of a clean test chamber. The liner must fit snugly. To eliminate any tendency for the liner to rotate during testing, tape the two (2) short edges at the join to the chamber wall with double coated tape.

Note: Replace the cork liners after 1 h use on each surface.

4.3.2 Cut 25 mm ± 1 mm length of cotton sliver and weigh. Pull fiber from the bundle until the weight is 0.1 g ± 0.005 g.

4.3.3 Place the three (3) folded test specimens and the cotton sliver into a test chamber. Place the cover on the chamber, and set the timer for a running time of 5 minutes ± 0.5 minutes. Turn on the airflow and start the testing machine.

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