



Perspiration Resistance

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 procedure is used to determine the ability of plastic rolled goods and leather trim materials to resist the effects of perspiration.

1.2 Applicability. This procedure applies to plastic rolled goods and leather trim materials

2 References

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

2.1 External Standards/Specifications.

ISO 105-X12

2.2 GM Standards/Specifications.

GMW3221

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 Artificial perspiration solution prepared as follows:

- Glacial acetic acid 25 g
- Sodium chloride 25 g
- Butyric acid 15 g
- Isovaleric acid 15 g
- Water 420 g

3.2.2 Clean, white gauze pad ISO 105-X12, 5 cm².

3.2.3 Number 1 gem paper clip, (trombones, approximately 32 mm × 7 mm) or scuffing apparatus as specified by material specification.

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

3.3 Test Vehicle/Test Piece. One (1) test specimen, a minimum of 5 cm² in size, is required.

3.4 Test Time.

Calendar time:	2 days
Test hours:	3 hours
Coordination hours:	24 hours

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. Prepare sample per material specification.

4.2. Conditions.

4.2.1 Environmental Conditions. Unless otherwise specified in the relevant material specification, conditioning shall be performed per GMW3221, Code A.

4.2.2 Test Conditions. Deviations from the requirements of this standard shall be agreed upon between supplier and vehicle manufacturer. Such requirements shall be specified on component drawings, test certificates, reports, etc.

4.3 Instructions. A perspiration solution is applied to the surface of a sample at 15 minute intervals and evaluated for blistering, bubbling and color change of the topcoat finish.

4.3.1 Test Procedure. Prepare the artificial perspiration solution and age for 24 h at room temperature.

4.3.1.1 Place the gauze pad on the test specimen and saturate the pad with the artificial perspiration solution.

4.3.1.2 Re-saturate the pad every 15 minutes + 2 minutes, 10 applications for total test duration of no <150 continuous minutes.

4.3.1.3 Remove the gauze pad.

4.3.1.4 Rub the test area with the paper clip or specified test apparatus to detect softening, blistering or bubbling of the coating.

5 Data

5.1 Calculations. Not applicable.

5.2 Interpretation of Results.

5.2.1 Satisfactory: No blistering, swelling, peeling, or softening or color change of the topcoat.

5.2.2 Unsatisfactory: Any blistering, swelling, peeling, softening or color change to the topcoat.

5.3 Test Documentation. Test report shall document the results of the test.

6 Safety

This Engineering Standard may involve safety requirements for hazardous materials, the method of operations and equipment. This standard does not propose to address all the safety issues associated with its use. It is the responsibility of the user of this standard to ensure compliance with all appropriate safety and health practices. This would include any specific training that may be required. The safety and health standards include site specific rules and procedures, company rules and procedures, and Government Standards. Contact shall be made with the appropriate site Safety and Health personnel for further direction and guidance in these matters.