GM WORLDWIDE ENGINEERING STANDARDS	Test Procedure	GMW17065

Surface Conductivity Test of Coated Plastic Parts

1 Scope

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 method is used to determine if a plastic part has the potential for electrostatic paint application by measuring dry film conductivity of the part surface (conductive primer or other surface treatment).

1.2 Foreword. Not applicable.

1.3 Applicability. This method is designed to be used on plastic parts to test the conductivity of a surface coating.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

None

2.3 Additional References.

None

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. Ransburg 76652 Digital Sprayability/Short Circuit Current Instrument (SCI) or equivalent.

3.3 Test Vehicle/Test Piece. Not applicable.

3.4 Test Time. Not applicable.

3.5 Test Required Information. Not applicable.

3.6 Personnel/Skills. Not applicable.

4 Procedure

4.1 Preparation.

4.1.1 Properly apply and cure the coating or surface treatment over the specified substrate part or panel following all manufacturer's application, film build, and bake recommendations.

4.1.2 Calibrate instrument per manufacturer's instructions.

4.2 Conditions.

4.2.1 Environmental Conditions. Not applicable.

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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 Maintaining an angle of 90° between the instrument and the surface to be measured, touch the two probes of the instrument to the surface to be measured.

4.3.2 Activate the instrument.

4.3.3 Record the indicated instrument reading to the nearest 0.1 MΩ (megohm).

4.3.4 Take a minimum of three readings.

5 Data

5.1 Calculations. Report the average of the readings.

5.2 Interpretation of Results. Not applicable.

5.3 Test Documentation. The test report shall report the material identification, thickness of each layer, total thickness of all layers combined, and the location of where the measurements were taken from the sample.

6 Safety

This standard may involve hazardous materials, operations, and equipment. This standard does not propose to address all the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

7 Notes

7.1 Glossary. Not applicable.

7.2 Acronyms, Abbreviations, and Symbols.

MΩ Megohm

SCI Short Circuit Current Instrument

8 Coding System

This standard shall be referenced in other documents, drawings, etc., as follows:

Test to GMW17065

9 Release and Revisions

This standard was originated in October 2013. It was first approved by the Manufacturing Engineering - Global Primer, Topcoat, and Color Technical Team in January 2014. It was first published in January 2014.

Issue	Publication Date	Description (Organization)
1	JAN 2014	Initial publication.

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