GM WORLDWIDE ENGINEERING STANDARDS	Test Procedure	GMW15891

Solvent Rub Method for Determining Cure of Painted Metal or Plastic Substrates

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 standard describes the test method to determine cure on painted metal or plastic parts and test panels.

1.2 Foreword. Not applicable.

1.3 Applicability. All vehicles.

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. Not applicable.

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 A minimum of 12 cm x 12 cm of soft cloth i.e., cheesecloth.

3.2.2 Test Solvents. Appropriate solvent as specified by the paint supplier on the Product Data Sheet or as defined by the responsible engineer.

3.3 Test Vehicle/Test Piece. Minimum sample size of 10 cm x 10 cm.

3.4 Test Time. Not applicable.

3.5 Test Required Information. Not applicable.

3.6 Personnel/Skills. Not applicable.

4 Procedure

4.1 Preparation. Test samples shall be cut from parts that are being evaluated when size and geometry of the part permit. When this is not possible, special test plaques (test panels of 100 mm x 300 mm are most suitable) shall be prepared using the same substrate material, substrate thickness, surface preparation (such

© Copyright 2013 General Motors Company All Rights Reserved

Documents Document Sharing Hub

Copyright General Motors Company
Provided by IHS Markit under license with General Motors Company
Reproduction, distribution or publication of these standards is expressly prohib
Licensee=/, User=,
Not for Resale,
Full document details: GM GMW15891 2013

as phosphatizing or anodizing), and coating material processing that represents the production part. If this test is being used as quality control validation, the procedure is to be performed on completed parts/vehicles.

4.2 Conditions.

4.2.1 Environmental Conditions. Not applicable.

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 Fold cloth in quarters. Saturate cloth with the appropriate solvent. Squeeze out excess solvent and test immediately.

4.3.2 Firm pressure shall be exerted during rubbing. With a 25 mm to 50 mm back-and-forth motion, apply ten double rubs (a back-and-forth motion constitutes one double rub) to the sample using the forefinger. The contact area should be a minimum of 16 mm in diameter.

5 Data

5.1 Calculations. Not applicable.

5.2 Interpretation of Results. The test samples shall be evaluated by examining the painted surface and paint residue on the rubbing cloth. Samples shall be rated per the rating scales immediately upon completion of the test. If sample to be tested is Elpo, primer surfacer, conductive primer or monocoat, use Table 1. If sample is clearcoated, use Table 2.

Table 1: Paint Rating for Elpo, Primer Surfacer, Primer or Monocoat Scale

Rating	Paint Surface	Paint Residue on Cloth
0	No change	None
1	Slight: Barely observable	Trace amount
3	Moderate: Readily noticeable, tackiness	Readily noticeable
5	Severe: Very obvious, sticky	Saturated with color

Note: Test panels must have been given the recommended bake.

Table 2: Clearcoat Rating Scale

Rating	Clearcoat Surface
0	No change
1	Slight: Barely observable haze
3	Moderate: Noticeable haze - tackiness
5	Severe: Very obvious, foggy, sticky

5.3 Test Documentation. A written report must be submitted with the test samples to the responsible engineers.

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.

© Copyright 2013 General Motors Company All Rights Reserved

Documents
Document Sharing Hub

Copyright General Motors Company
Provided by IHS Markit under license with General Motors Company
Reproduction, distribution or publication of these standards is expressly prohib
Licensee=/, User=,
Not for Resale,
Full document details: GM GMW15891 2013