



Plasticizer Migration of Sealing Compounds

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 shall be used to determine the plasticizer migration of sealing compounds. When topcoated, plasticizers can lead to coating problems and craters in the base paint and topcoat.

1.2 Applicability. Paint shop sealers.

1.3 Remarks. Not applicable.

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

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 Spatula.

3.2.2 Magnifying glass.

3.2.3 Ruler.

3.3 Test Vehicle/Test Piece. The test sheet metal shall consist of flat and burr-free original body sheet metal. The surface quality of the test sheet metal shall be selected to correspond to the information on the part drawing or in the material specifications.

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 Test Sample Preparation. The sealing compound being tested shall be stirred vigorously with a spatula for 1 minute before the start of the test.

An approximate 8 mm diameter bead of the sealing compound being tested shall be applied centrally to electrocoated sheet metal in the longitudinal direction. Immediately after application of the sealing compound, the test sheet metal shall be placed upright.

4.2 Conditions. Not applicable.

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 Test Procedure.

4.3.1.1 Migration of the plasticizer from the sealer bead shall be determined after 24 h, 48 h and 72 h using a magnifying glass and a ruler.

4.3.1.2 Seventy two (72) h after the application of the sealing compound, the test sheet metal shall be topcoated and baked according to the relevant material specification.

5 Data

5.1 Calculations. Not applicable.

5.2 Interpretation of Results. Not applicable.

5.3 Test Documentation.

5.3.1 Evaluation and Rating. After baking of the topcoated test panel with sealer, it shall be examined in the area of the topcoated plasticizer for coating disturbances, formation of craters, etc.

The minimum allowable appearance requirements and maximum allowable amount of plasticizer migration shall be called out in the relevant material specification.

5.4 Report. The plasticizer migration of sealing compounds determined per this test method shall be recorded in a test report to the nearest 0.5 mm and quoted as such in the material specification, engineering drawings, etc.

When testing several components, each determined value shall be recorded separately.

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.

Elpo Electrodeposition, Electrocoat

8 Coding System

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

Test to GMW3022