



Adhesion Evaluation of Adhesives and Sealants, Body in White

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. Determination of the adhesion of adhesives and sealants used in body in white to substrates on which these materials are employed.

1.2 Applicability. Adhesives and sealants.

1.3 Remarks. This standard evaluates the adhesion performance (separation mode) by peeling off the cured adhesive from metal sheets.

2 References

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

2.1 External Standards/Specifications.

ISO 10365

2.2 GM Standards/Specifications.

GMW15477

2.3 Additional References.

Relevant Material Specification

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 Pliers.

3.2.2 Spatula.

3.3 Test Vehicle/Test Piece.

3.3.1 Substrates. Substrates and corrosion protection/forming oils shall be chosen per the relevant material specification.

3.3.2 Adhesives. Adhesive/Sealant (body in white) to be tested.

3.4 Test Time. Reference the lab test procedure(s) in Section 4 for timing details.

3.5 Test Required Information. Not applicable.

3.6 Personnel/Skills. Test technician capable of running tests to meet requirements.

4 Procedure

4.1 Preparation. The test samples shall be prepared according to GMW15477 and then be cured according to the curing schedule of the relevant material specification.

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 The test samples prepared according to 4.1 shall be passed through the tests and storage conditions as required in the relevant material specification.

4.3.2 To test the adhesion (separation mode) of constrained adhesives and sealants (see GMW15477) the second test sheet shall be peeled off by hand with a pliers at an angle of 90 degrees.

4.3.3 To test the adhesion (separation mode) of unconstrained adhesives and sealants (see GMW15477) the material shall be peeled off by hand with a spatula at an angle of 90 degrees.

5 Data

5.1 Calculations. Not applicable.

5.2 Interpretation of Results. Separation mode evaluation and rating shall be performed according to ISO 10365.

5.3 Test Documentation. With reference to this test procedure the results shall be summarized in a test report.

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.

7 Notes

7.1 Glossary. Not applicable.

7.2 Acronyms, Abbreviations, and Symbols. Not applicable.

8 Coding System

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

Test to GMW14706

9 Release and Revisions

This standard was originated in October 2005. It was first approved by Global Materials Team in March 2007. It was first published in March 2007.

Issue	Publication Date	Description (Organization)
1	MAR 2007	Initial publication.
2	SEP 2012	5 year refresh update; conversion into new template Paragraph 4.3 (was 5.3) and paragraph 5.2 (was 6) reworked (Adhesive GSSLT)
3	AUG 2017	Refresh. (Materials – Adhesives Global Subsystem Leadership Team)