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Replacing GB/T 16266-2008

Test Method of Packaging Materials - Contact Corrosion

包装材料试验方法 接触腐蚀

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Table of Contents

Foreword 3

1 Scope 5

2 Normative References 5

3 Test Environment Conditions 5

4 Reagents and Test Materials 6

5 Instruments and Equipment 7

6 Samples 7

7 Test Procedures 8

8 Test Report 12

Appendix A (informative) Result Evaluation 13

Foreword

This Standard was drafted in accordance with the rules in GB/T 1.1-2009.

This Standard serves as a replacement of GB/T 16266-2008 *Test Method of Packaging Materials - Contact Corrosion*.

In comparison with GB/T 16266-2008, except from editorial modifications, the main technical changes are as follows:

---Terms and definitions are deleted (see Chapter 3 in Version 2008);

---The requirements for test environment conditions are added (see Chapter 3);

---The requirements for desiccator's dimensions are modified (see 5.2; 4.2 in Version 2008);

---The requirements for test specimen pretreatment are deleted (see 5.2.4 in Version 2008);

---The operational requirements for rigid or block materials are modified (see 6.2 and 7.3.2; 5.2.2, 5.2.3 and 6.1 in Version 2008);

---The description of sampling quantity of granular materials is added (see 6.3; 5.2.3 in Version 2008);

---The requirements for test piece cleaning medium and storage time are modified (see 7.1; 5.1 in Version 2008);

---The preheating temperature of test pieces is modified (see 7.4; 6.4 in Version 2008);

---Appendix A Result Evaluation is added (see Appendix A).

This Standard was proposed by and shall be under the jurisdiction of National Technical Committee 49 on Packaging of Standardization Administration of China (SAC/TC 49).

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Test Method of Packaging Materials - Contact Corrosion

1 Scope

This Standard stipulates contact corrosion test method of packaging materials against the contacted metallic surface. It includes test environment conditions, reagents, test materials, instruments and equipment, samples, test procedures and test report.

This Standard is applicable to contact corrosion test of packaging materials against steel and aluminum. The contact corrosion test against the surface of other metallic materials may take this as a reference.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 678 *Chemical Reagent - Ethanol;*

GB/T 687 *Chemical Reagent - Glycerol;*

GB/T 699 *Quality Carbon Structural Steels;*

GB/T 3880.1 *Wrought Aluminum and Aluminum Alloy Plates, Sheets and Strips for General Engineering - Part 1: Technical Conditions of Delivery;*

GB/T 6682 *Water for Analytical Laboratory Use - Specification and Test Methods;*

GB/T 15723 *Laboratory Glassware - Desiccator;*

GB/T 30435 *Electric Gravity Convection and Forced Ventilation Ovens;*

SH 0004 *Solvent Oil for Use in Rubber Industry*

3 Test Environment Conditions

Tests shall be conducted at 20 °C ~ 30 °C, and with the relative humidity of not more than 80%.

5 Instruments and Equipment

5.1 Electric Blast Drying Oven

Electric blast drying oven shall comply with the requirements in GB/T 30435.

5.2 Desiccator

Desiccator shall comply with the requirements in GB/T 15723. The internal diameter of desiccator body: 240 mm.

5.3 Electric Blower

Electric blower shall support two purposes---for cold and hot.

6 Samples

6.1 Flexible Sheet Material

Take representative test specimens from different parts of a sample. The dimensions of each test specimen shall be: 75 mm × 50 mm.

NOTE: flexible sheet material refers to flexible flaky material, for example, sheet of paper, or, thin film.

6.2 Rigid or Block Material

Take representative test specimens from the flat surface of a sample. The dimensions of each test specimen shall be: 75 mm × 50 mm; the thickness shall not exceed 10 mm.

If the sample is smaller than the dimensions of the test specimens, then, multiple samples shall be used.

NOTE: rigid material refers to material that is not easily deformed, for example, paperboard, or, timber; block material refers to stereo-structured non-flaky material, for example, foam block, or, rubber block.

6.3 Granular Material

Select a sufficient quantity of representative samples. Grind them into granules, till they can pass through 40-mesh standard sieve but cannot pass through 80-mesh standard sieve. Each piece of sample shall be able to cover an area of 50 mm × 25 mm; within the area of coverage, no metal test piece shall be exposed.

In terms of materials that are not suitable for grinding, each piece of sample shall be able to cover an area of 50 mm × 25 mm.

Record the test surface, including the part covered by glass slide and the part uncovered by glass slide; whether the uncovered part generates rusty spots, corrosion spots, and forms loosened or granular spots, and discoloration. In addition, describe the quantity, the status, the distribution, and other test phenomena.

If necessary, take Appendix A as a reference to evaluate the result of steel test piece and aluminum alloy test piece.

8 Test Report

Test report shall at least include the following content:

a) Test objective;

b) Serial No. of this Standard;

c) Detailed description of test pieces and samples used in test, including the variety, dimensions, quantity and status, etc.

d) Test environment conditions;

e) Test conditions: temperature, time and concentration of aqueous glycerin, etc.

f) Test result (if necessary, include evaluation);

g) Test date;

h) Tester’s signature;

i) Any circumstances that are deviated from this Standard and circumstances that might affect the result.

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