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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JB/T 10696.9-2011

**Test methods for mechanical, physical and chemical properties
of electric cables and wires - Part 9: Termite test**

电线电缆机械和理化性能试验方法 第9部分：白蚁试验

(English Translation)

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Foreword

JB/T 10696 "Test methods for determining mechanical, physical and chemical properties of electric cables and wires - Part 9: Termite test" is divided into 10 parts.

- Part 1. General;
- Part 2. Flexing test for flexible cables and wires;
- Part 3. Bending test;
- Part 4. Test for copper naphthenate content of protective coverings;
- Part 5. Corrosion spread test;
- Part 6. Test for abrasion of oversheaths;
- Part 7. Tear test;
- Part 8. Test for oxidative inductive time;
- Part 9. Termite test;
- Part 10. Rat gnawing test. This part is the part 9 of JB/T 10696. Appendix A and Appendix B of this part are informative.

1 Scope

This part of JB/T 10696 specifies the test conditions, test procedures, test results and calculations for termite tests. This part specifies three methods for testing termites. the knockdown method, the experimental population method, the nest method.

This part applies to the determination of the resistance to termite corrosion of electric wire and cable products and their sheath materials (mainly plastic or rubber).

2 Normative references

The provisions in following documents become the provisions of this part through reference in this part of JB/T 10696. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this part; however, parties who reach an agreement based on this part are encouraged to study if the latest versions of these documents are applicable.

For undated references, the latest edition of the referenced document applies.

JB/T 10696.1-2007 Test methods for determining mechanical physical and chemical properties of electric cables and wires - Part 1: General

3 Termite species and feeding

3.1

Termites used for testing shall be coptotermes. The species used in the test shall be identified by a formal research institute before they can be used in the termite test of the electric cables and wires.

3.2

For the termite test in the same batch of products or materials, it shall use the termites from same nest as much as possible.

3.3

The coptotermes taken shall be robust, disease-free and free of large numbers of mites. Termites are usually kept in a special breeding tank that supplies enough water and feed - pine boards. The breeding tank shall be capped or covered with a thin copper mesh, to prevent termites from escaping.

3.4

The coptotermes for test shall be fed indoors for more than one week.

3.5

If other species of termites are used for testing, it shall be detailed and indicated in the test report.

4.1 Overview

Terms and definitions, general provisions of the test, verification of the test equipment are as specified in JB/T 10696.1-2007.

4.2 Scope of application

The method is suitable for determining the knockdown time after the worker ant of the coptotermes for test is in contact with the sample containing the anti-termite agent.

4.3 Test conditions

4.3.1

Coptotermes. The number of worker ant is 60, the weight of each worker ant is between (2.6 ~ 3.6) mg.

4.3.2

Specimen. When using the test piece, take a specimen with a length of 50 mm, a width of 50 mm and a thickness of 1 mm. When using the electric cable and wire to prepare specimen directly, it may peel off the relevant portion and cut it into the size same as the test piece, but the thickness shall be the original thickness. When the peeled off portion can reach to the required size, it shall press it again into the test piece, the size requirements are same as that of the test piece, the number of specimens for each test is 3.

4.3.3

Test device. The upper and lower plates are made of 2 mm thick plexiglass with a length of 185 mm and a width of 60 mm. At the middle of the upper plate, respectively drill three

circular holes with a diameter of 20 mm, drill four circular holes with a diameter of 4 mm at both sides, respectively; drill four holes at both sides of the lower plate which are symmetrical to those on the upper plate.

Place three glass rings with a diameter of not less than 40 mm and a height of 25 mm in the middle of the two plates, the eight holes on both sides are fixed with eight M3 x 36 mm screws. The detailed dimensions are as shown in Figure 1.

5.6 Data processing

The rating of the test sample shall be based on the grade of the most severely eroded one in the specimens.

6.1 Overview

Terms and definitions, general provisions of the test, verification of the test equipment are as specified in JB/T 10696.1-2007.

6.2 Scope of application

The method is applicable to toxic, non-toxic or new electric wire and cable products or materials for long-term evaluation of termite erosion.

6.3 Test conditions

6.3.1

Test feeding tank. length 0.8 m, width 0.5 m, height 0.5 m, with water source in the tank.

6.3.2

The coptotermes nests for feeding test are required to be nests dug in winter and spring, with a diameter of more than 300 mm, and kept in test tanks for the purposes of testing samples.

6.3.3

Appropriate amount of pine boards as feed for termites to live for a long time.

6.3.4

Specimen. When the specimen is a product or material containing anti-termite agent, the test piece has a length of 50 mm, a width of 50 mm and a thickness of 2 mm, the number is three; it is one segment of 1 m length for electric wire; it is one segment of 0.6 m length for electric cable. When the specimen is a product or material containing no anti-termite agent, the test piece has a length of 150 mm, a width of 100 mm, a thickness of 2 mm, the number is three; it is 3 m length for electric wire; it is 1 m length for electric cable.