

ICS 29.060

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

GB/T 2951.12-2008

Replacing GB/T 2951.2-1997

**Common test methods for insulating and sheathing materials of
electric and optical cables -- Part 12: Methods for general
application -- Thermal ageing methods**

电缆和光缆绝缘和护套材料通用试验方法 第12部分：通用试验方法 热老化试验
方法

(English Translation)

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Foreword

GB/T 2951 "cable and the cable Common test methods for insulating and sheathing materials" is divided into 10 parts.

--- Part 11. General test methods for measuring the thickness and overall dimensions --- --- mechanical tests;

--- Part 12. Common test methods --- Thermal aging methods;

--- Part 13. General test method for determining the density method --- --- Water absorption tests - Shrinkage test;

--- Part 14. Common test methods --- low temperature test;

--- Part 21. elastomeric compounds specific test method Ozone resistance --- --- Hot set test - Mineral oil immersion test;

--- Part 31. Methods specific to PVC compounds - Pressure test --- --- high temperature resistance to cracking;

--- Part 32. Methods specific to PVC compounds - Loss of mass test --- --- thermal stability test;

--- Part 41. polyethylene and polypropylene compounds - Test methods --- --- ESCR test melt index measurement Measurement Method --- direct combustion of polyethylene in carbon black and/or mineral filler content --- thermal gravimetric analysis (TGA) measurements of carbon Black --- microscopy to assess the content of carbon black dispersion in polyethylene;

--- Part 42. polyethylene and polypropylene compounds - Test methods --- After heat treatment the tensile strength and elongation at break test Increase the quality of experience --- --- winding test air test after thermal aging was measured after heat

treatment --- --- long-term thermal stability Qualitative tests --- copper-catalyzed oxidative degradation test methods;

--- Part 51. Methods specific to filling compounds - Drop point --- --- oil separator temperature brittleness --- --- total acid corrosion when in doubt, rubber materials shall be tested in the state of the blower does not work. "(1997 version 8.1.2; this edition 8.1.2);

--- The fifth paragraph 8.1.3.1 "component substantially" to "significant component" and added "in the same oven" (1997 Excerpts of 8.1.3.1); Version 8.1.3.1;

--- 8.1.3.3 is amended as disaggregated "a)" item and "b)" item (1997 version 8.1.3.3; this version of 8.1.3.3);

--- Table 1 adds the title of the table, but also increased the fifth and sixth insulated core conductor aging test method outlined content (1997 edition Table 1; Table 1 edition);

--- 8.4.1b) formulas of the formula in Note "under Cp --- atmospheric air heat units" by the "1.003J/g" to "(J · g-1 K-1)" (1997 Version 8.4.1; 8.4.1 edition).

This part is proposed by the China Electrical Equipment Industrial Association.

This part of the National Standardization Technical Committee of wire and cable.

This section is drafted. Shanghai Electric Cable Research Institute.

1 Scope

GB/T 2951 provides power distribution and communication cables and fiber optic cable, including marine and offshore cables and cable insulation and jacketing polymer Test methods for materials.

This section GB/T 2951 provisions of the Thermal aging methods. The method is suitable for the most common types of insulating and sheathing materials (shells of the body, polyvinyl chloride, polyethylene, polypropylene, etc.).

1.1 Normative References

The following documents contain provisions which, through reference to GB/T 2951 to the present, constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 2951.11-2008 cable and the cable Common test methods for insulating and sheathing materials - Part 11. General test side Law --- --- Measurement of thickness and overall dimensions of mechanical tests (IEC 60811-1-1:1993, IDT) GB/T 2951.32-2008

cable and the cable Common test methods for insulating and sheathing materials - Part 32. Polyvinyl chloride mixture Special test methods --- --- Loss of mass test - Thermal stability test (IEC 60811-3-2. 1985, IDT) Test Principle 2 this section does not provide all of the test conditions (such as temperature, duration, etc.) as well as all of the test requirements, they should be on cable Product standards to be defined.

Any test requirements specified in this standard can be modified in the relevant product standard cable in order to meet the needs of a particular type of cable.

3 Scope

Test conditions and test parameters specified in this section for the most common types of cables, optical cables, wires and cords insulation and sheathing material.

4 Type tests and other tests

Test methods specified in this part first as the type of test. Type test some pilot projects and trials are often conducted (Such as routine test) conditions are fundamentally different, this section has been pointed out these differences.

5 Pretreatment

All tests shall be insulated and sheath material extruded or vulcanized (or crosslinking) after storage for at least 16h before the test.

6 Temperature test

Unless otherwise specified, the tests should be carried out at ambient temperature.

GB/T 2951.12-2008/IEC 60811-1-2. 1985