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

GB/T 2951.13-2008

Replacing GB/T 2951.3-1997

Common test methods for insulating and sheathing materials of electric and optical cables -- Part 13: Methods for general application -- Measurement for determining the density -- Water absorption tests -- Shrinkage test

电缆和光缆绝缘和护套材料通用试验方法 第13部分: 通用试验方法 密度测定方法
吸水试验 收缩试验

(English Translation)

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Table of Contents

Foreword
1 Scope
1.1 Normative References
3 Scope
4 Type tests and other tests
5 Pretreatment
6 Temperature test
7 Intermediate value

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 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 specifies the method for determining the density, water absorption test methods and test methods for shrinkage. These methods are applicable to most Cable Through type of insulation and sheathing materials (elastomers, 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.

ISO 1183. 1987 Non-plastic foam density and relative density determination Test Principle 2 this section does not provide all of the test conditions (such as temperature, duration, etc.) as well as all the test requirements, they should be in the relevant cable products the standard to be provided.

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 apply to the most commonly used 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. Some pilot projects of the type of tests and test regular (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 proceeding.

If the test is carried out at ambient temperature, samples should be (23 ± 5) °C temperature storage at least 3h.

6 Temperature test

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

7 Intermediate value

When the test data obtained proper number in ascending or descending order, if the number of valid data is odd, the median is positive A middle value; if is even, the median is the average of the two middle values.

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