

ICS 29.060

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

GB/T 2951.41-2008

Replacing GB/T 2951.8-1997

**Common test methods for insulating and sheathing materials of electric and optical
cables -- Part 41: Methods specific to polyethylene and polypropylene compounds --
Resistance to environmental stress cracking -- Measurement of the melt flow index --
Carb**

电缆和光缆绝缘和护套材料通用试验方法 第41部分：聚乙烯和聚丙烯混合料专用
试验方法 耐环境应力开裂试验 熔体指数测量方法 直接燃烧法测量聚乙烯中碳黑
和(或)矿物质填料含量 热重分析法(TGA)测量碳黑

(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;

This part of the standard replaces the previous editions are.

--- GB/T 2951.8-1997;

--- GB 2951.36-1983, GB/T 2951.36-1994, GB/T 2951.39-1994, GB/T 2951.41-1994, GB/T 2951.42-1994.

GB/T 2951.41-2008/IEC 60811-4-1:2004 Common test methods for cables and cable insulation and sheathing materials Part 41. polyethylene and polypropylene compounds - Test methods

--- Resistance to environmental stress cracking test --- melt index Direct measurement method --- Measurement of combustion carbon black polyethylene and (or) mineral filler content --- thermal gravimetric analysis (TGA) Measurement of carbon black content --- microscopy assessment polyethylene Carbon black dispersion

1.1 Scope

This section GB/T 2951 specifies the distribution and communication cables and fiber optic cable, including marine and offshore cables and optical fiber polymer must Edge sheathing materials and test methods. The test method is applicable to polyethylene (PE) and polypropylene (PP) mixture, including foam insulation and tape Skin foam insulation.

1.2 Normative references

The following documents contain provisions which, through reference to GB/T 2951 to the present, constitute provisions of this section. For dated references Documents, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encourage the present section Research on the parties to reach an agreement to use the latest versions of these documents. For undated references, the latest edition of in this section.

GB/T 2951.13-2008 cable and the cable Common test methods for insulating and sheathing materials - Part 13. General test side Density determination method --- --- --- Water absorption tests - Shrinkage test (IEC 60811-1-3:1993, IDT) ISO 18553:2002 Polyethylene pipes, devices and methods to assess the mix of pigments and carbon black dispersion

2 Terms and definitions

For ease of testing, we should distinguish between low-density, medium density and high density polyethylene.

23 °C Density Polyethylene Type a/(g/cm³) LDPE ≤0.925 Medium density polyethylene > 0.925, ≤0.940 High density polyethylene > 0.940 a density means these unfilled resin. Determination according to GB/T 2951.13-2008 provisions of Chapter 8.

3 Test principle

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.

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

4 Scope

Test conditions and test parameters specified in this section apply to the cable, the most common type of cable, wires and cords insulation and sheathing materials.

GB/T 2951.41-2008/IEC 60811-4-1:2004