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

GB/T 5023.3-2008

**Polyvinyl chloride insulated cables of rated voltages up to and
including 450/750 V -- Part 3: Non-sheathed cables for fixed
wiring**

(English Translation)

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Foreword

GB/T 5023 Polyvinyl Chloride Insulated Cables of Rated Voltages up to and Including 450/750V is divided into 7 parts.

- Part 1.General Requirements;
- Part 2.Test Methods;
- Part 3.Non-Sheathed Cables for Fixed Wiring;
- Part 4.Sheathed Cables for Fixed Wiring;
- Part 5.Soft Cables (Soft Wires);
- Part 6.Lift Cables and Cables for Flexible Connections;
- Part 7.Flexible Cables Screened and Unscreened with Two or More Conductors.

This Part is Part 3 of GB/T 5023.This Part equivalently adopts IEC 60227-3.1997 Polyvinyl Chloride Insulated Cables of Rated Voltages up to and Including 450/750V - Part 3.Non-Sheathed Cables for Fixed Wiring, Version 2.1 (English Edition).

For ease of use, this Part of GB/T 5023 makes the following editorial changes.

- Use "decimal point" to replace the "comma" that acts as the decimal point
- Delete the Foreword of IEC 60227-3.1997.

This Part replaces GB 5023.3-1997 Polyvinyl Chloride Insulated Cables of Rated Voltages up to and Including 450/750V.

Compared with GB 5023.3-1997, this Part mainly has the following changes.

- Regulate the upper- and lower-limit against the overall diameter of 60227 IEC Model 01, 02, 05, 06, 07, 08, and other types of cables; adjust the upper limit of diameter of cables in the original standard (Table 1, 3, 5, 7, 9, 11);

--- Modify 60227 IEC Model 01-type cable's 35mm² and 50mm² minimum insulation resistance; 35mm² corresponding minimum insulation resistance of

0.0040 Mohm·km was changed into 0.0043 Mohm·km; while 50mm² corresponding

minimum insulation resistance of 0.0045 Mohm·km was changed into 0.0043 Mohm·km.

This Part was proposed by China Electrical Equipment Industrial Association.

Polyvinyl Chloride Insulated Cables of Rated Voltages

up to and Including 450/750V - Part 3.Non-Sheathed

Cables for Fixed Wiring

1.1 Scope

This Part of GB/T 5023 details the particular specifications for polyvinyl chloride insulated single-core non-sheathed cables for fixed wiring and rated voltages up to and including 450/750V.

All cables shall comply with the appropriate requirements given in GB/T 5023.1, and the individual types of cables shall each comply with the particular requirements of this Part.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of GB/T 5023. For dated references, the subsequent amendments (excluding corrigendum) 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.

GB/T 2951.11-2008 Common Test Methods for Insulating and Sheathing Materials of Electric and Optical Cables - Part 11.Methods for General Application - Measurement of Thickness and Overall Dimensions (IEC 60811-1-1.2001, IDT)

GB/T 2951.12-2008 Common Test Methods for Insulating and Sheathing

Materials of Electric and Optical Cables - Part 12.Methods for General Application

- Thermal Ageing Methods (IEC 60811-1-2.1985, IDT)

GB/T 2951.14-2008 Common Test Methods for Insulating and Sheathing

Materials of Electric and Optical Cables - Part 14.Methods for General Application

- Test at Low Temperature (IEC 60811-1-4.1985, IDT)

GB/T 2951.31-2008 Common Test Methods for Insulating and Sheathing

Materials of Electric and Optical Cables - Part 31.Methods Specific to PVC

Compounds - Pressure Test at High Temperature - Test for Anti-Crack (IEC 60811-3-1.1985, IDT)

GB/T 2951.32-2008 Common Test Methods for Insulating and Sheathing

Materials of Electric and Optical Cables - Part 32.Methods Specific to PVC

Compounds - Loss of Mass Test - Thermal Stability Test (IEC 60811-3-2.1985, IDT)

GB/T 3956-1997 Conductors Of Insulated Cables (idt IEC 60228.1978)

GB/T 5023.1 Polyvinyl Chloride Insulated Cables of Rated Voltages up to and Including 450/750V - Part 1.General Requirements (GB/T 5023.1-2008, IEC 60227-1.2007, IDT)

GB/T 5023.2-2008 Polyvinyl Chloride Insulated Cables of Rated Voltages up to and Including 450/750V - Part 2.Test Methods (IEC 60227-2.2003, IDT)

GB/T 18380.12-2008 Test on Electric and Optical Fiber Cables under Fire Conditions - Part 12.Test for Vertical Flame Propagation for a Single Insulated Wire or Cable (IEC 60332-1-2.2004, IDT)

2 Single-Core Non-Sheathed Cable with Rigid

Conductor for General Purposes

2.2 Rated voltage

450/750V.

2.3.1 Conductor

Number of cores. 1.

The conductors shall comply with the requirements of GB/T 3956-1997.

- Class 1 for solid conductors;
- Class 2 for stranded conductors.

2.3.2 Insulation

The extruded insulation shall be polyvinyl chloride compound of Type PVC/C applied

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