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SANS 1411-2:2014

Edition 2.4

SOUTH AFRICAN NATIONAL STANDARD

Materials of insulated electric cables and flexible cords

Part 2: Polyvinyl chloride (PVC)

WARNING

**This standard references other
documents normatively.**

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Table of changes

Change No.	Date	Scope
Amdt 1	2006	Amended to update referenced standards.
Amdt 2	2009	Amended to include requirements for compatibility, to change the units of measurement in the case of ageing and the test for loss of mass on heating, and to correct editorial errors in tables 2 and 3.
Amdt 3	2011	Amended to change the ageing period and the duration of the test for loss of mass on heating for type D4 insulation, and to change the maximum variation in the test for resistance to oil for type D6 insulation.
Amdt 4	2014	Amended to update referenced standards.

Foreword

This South African standard was approved by National Committee SABS/TC 066, *Electric cables*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in February 2014.

This document supersedes SANS 1411-2:2011 (edition 2.3).

A vertical line in the margin shows where the text has been technically modified by amendment No. 4.

SANS 1411 consists of the following parts, under the general title *Materials of insulated electric cables and flexible cords*:

Part 1: Conductors.

Part 2: Polyvinyl chloride (PVC).

Part 3: Elastomers.

Part 4: Cross-linked polyethylene (XLPE).

Part 5: Halogen-free, flame-retardant materials.

Part 6: Armour.

Part 7: Polyethylene (PE).

Annex A forms an integral part of this document. Annex B is for information only.

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Materials of insulated electric cables and flexible cords

Part 2: Polyvinyl chloride (PVC)

1 Scope

This part of SANS 1411 specifies requirements for PVC components used in insulated electric cables and flexible cords.

NOTE As this part of SANS 1411 covers only the PVC component(s) of a finished cable or flexible cord, the quality evaluation of such component(s) will form part of the quality evaluation of any consignment or lot of cable or cord. Any sampling plans and criteria for compliance given in a standard that covers the cables or cords will, therefore, apply to inspections and tests carried out in terms of this part of SANS 1411.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of SANS 1411. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this part of SANS 1411 are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards can be obtained from the SABS Standards Division.

ASTM D2863, *Standard test method for measuring the minimum oxygen concentration to support candle-like combustion of plastics (oxygen index).*

SANS 1507-4, *Electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1 900/3 300 V) – Part 4: XLPE Distribution cables* **Amdt 2**

SANS 60332-1-2/IEC 60332-1-2, *Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed flame.* **Amdt 1**

SANS 60754-1/IEC 60754-1, *Test on gases evolved during combustion of materials from cables – Part 1: Determination of the amount of halogen acid gas.*

SANS 60811-401/IEC 60811-401, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 401: Miscellaneous tests – Thermal ageing methods – Ageing in an air oven.* **Amdt 4**

SANS 60811-404, IEC 60811-404, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 404: Miscellaneous tests – Mineral oil immersion tests for sheaths.* **Amdt 4**

SANS 60811-409/IEC 60811-409, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 409: Miscellaneous tests – Loss of mass test for thermoplastic insulations and sheaths.* **Amdt 4**