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Edition 1

# **SOUTH AFRICAN NATIONAL STANDARD**

## **Energy efficiency in buildings**

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**Table of changes**

<b>Change No.</b>	<b>Date</b>	<b>Scope</b>

**Acknowledgement**

The SABS Standards Division wishes to acknowledge the valuable assistance derived from the Australian Building Codes Board.

**Foreword**

This South African standard was approved by National Committee SABS SC 59G, *Construction standards – Energy efficiency and energy use in the built environment*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in August 2011.

Reference is made in 4.5.1.1 and 4.6.1.1 to the "relevant legislation". In South Africa this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

Annexes A, B, C, D and E form an integral part of this document. Annex F is for information only.

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## **Energy efficiency in buildings**

### **1 Scope**

This standard specifies the design requirements for energy efficiency in buildings and of services in buildings with natural environmental control and artificial ventilation or air conditioning systems.

### **2 Normative references**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. Information on currently valid national and international standards can be obtained from the SABS Standards Division.

ASHRAE 90.1, *Energy standard for buildings except low-rise residential buildings.*

ASTM C 177, *Standard test method for steady-state heat flux measurements and thermal transmission properties by means of the guarded-hot-plate apparatus.*

ASTM C 518, *Standard test method for steady-state thermal transmission properties by means of the heat flow meter apparatus.*

ASTM C 1199, *Standard test method for measuring the steady-state thermal transmittance of fenestration systems using hot box methods.*

ASTM C 1363, *Standard test method for thermal performance of building materials and envelope assemblies by means of a hot box apparatus.*

ISO 9050, *Glass in building – Determination of light transmittance, solar direct transmittance, total solar energy transmittance, ultraviolet transmittance and related glazing factors.*

SANS 428, *Fire performance classification of thermal insulated building envelope systems.*

SANS 613, *Fenestration products – Mechanical performance criteria.*

SANS 1307, *Domestic solar water heaters.*

SANS 6211-1, *Domestic solar water heaters – Part 1: Thermal performance using an outdoor test method.*

SANS 6211-2, *Domestic solar water heaters – Part 2: Thermal performance using an indoor test method.*

SANS 10106, *The installation, maintenance, repair and replacement of domestic solar water heating systems.*