

ICS 91.140.65

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**SABS**  
**60335-2-21\***

*\*This standard references other standards*

Edition 1

2000

## **SOUTH AFRICAN STANDARD**

Specification

SABS 60335-2-21

**Safety of household and similar electrical appliances**

**Part 2: Particular requirements for storage water heaters**

**WARNING — Front-end specification.  
Can only be read in conjunction with  
SABS IEC 60335-1:1991.**

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**SOUTH AFRICAN BUREAU OF STANDARDS**

**SPECIFICATION**

**SAFETY OF HOUSEHOLD AND SIMILAR  
ELECTRICAL APPLIANCES**

**PART 2: PARTICULAR REQUIREMENTS FOR  
STORAGE WATER HEATERS**

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## SABS 60335-2-21

Ed. 1

### Notice

This part of SABS 60335-2 was approved in accordance with SABS procedures on 14 July 2000.



Manufacturers producing fixed electric storage water heaters to this part of SABS 60335-2 may, under a mark permit issued by the SABS, apply the certification mark as illustrated above to the commodity as evidence to the purchaser that the commodity is being made in accordance with this part of SABS 60335-2 and that compliance with its requirements is ensured by tests and inspections carried out by the SABS.

NOTE 1 In terms of the Standards Act, 1993 (Act 29 of 1993), it is a punishable offence for any person other than a mark permit holder to apply a certification mark to a commodity or to refer to the SABS or any of its standards in a manner likely to create the impression that the commodity has been approved by the SABS. Furthermore, no person shall claim or declare that he or any other person complied with an SABS standard unless

- a) such claim or declaration is true and accurate in all material respects, and
- b) the identity of the person on whose authority such claim or declaration is made, is clear.

NOTE 2 It is recommended that authorities who wish to incorporate any part of this standard into any legislation in the manner intended by section 31 of the Act consult the SABS regarding the implications.

This part of SABS 60335-2 will be revised when necessary in order to keep abreast of progress. Comment will be welcome and will be considered when this part of SABS 60335-2 is revised.

### National foreword

The National Committee (SABS TC 72: *Safety of electrical appliances and electronic equipment*) responsible for this part of SABS 60335-2 has accepted the text of IEC 60335-2-21:1997, *Safety of household and similar electrical appliances – Part 2: Particular requirements for storage water heaters*, as suitable for publication, with certain technical deviations but without language editing, as a South African standard, with the addition of a cover page, notice, national foreword, national introduction and committee list.

As a signatory to the TBT agreement of the World Trade Organization, South Africa is obliged to use international standards as a basis for local standards and to introduce differences only when really necessary. Because of the problems explained in the national introduction, SABS TC 72 was obliged to effect certain changes to the specification to accommodate local requirements.

The changes (and the reasons for the changes) are detailed and explained as follows:

- **Subclause 2.201.** A definition for the locally required safety valve (TP valve) has been included.
- **Subclause 7.1.** The markings on the water heater have been amended to include reference to the local functional control (pressure control and expansion control valves) and safety valve (TP valve).

**Attention is drawn to references made in this standard. These references are indispensable for the application of this standard.**

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- **Subclause 7.12.1.** The instructions will give details of certain local requirements of installation.
- **Subclauses 19.1 and 19.101.** Water heaters installed in accordance with SABS 0254 are not considered likely to be emptied in normal use, and consequently the relevant tests are not considered necessary.
- **Subclause 19.201.** The possible uncontrolled spillage of water and steam when the safety relief device operates is considered unsafe and allowance is made for controlled discharge.
- **Subclause 22.101.** The rated pressure of closed water heaters shall be one of the following: 0,1 MPa; 0,2 MPa; 0,3 MPa; 0,4 MPa; or 0,6 MPa.
- **Subclause 22.102.** Closed water heaters are tested at twice the rated pressure, and no other option is considered.
- **Subclause 22.103.** The conditions described in 0.1 and 0.2 are self-explanatory. No other option is considered.
- **Subclause 22.111.** The maximum temperature is 95 °C.
- **Subclause 24.102.** The reason for the change to one temperature and one test is two-fold:
  - the additional protection derived from the incorporation and function of the safety valve (TP valve) which forms part of the supply of all local water heaters, and
  - the availability of water heaters with rated pressures of 0,1 MPa; 0,2 MPa; 0,3 MPa; 0,4 MPa and 0,6 MPa. The test should take cognizance of this variety of pressures and should apply in all cases.

The following publications are quoted in this standard:

SABS 198:1999, *Functional-control valves and safety valves for domestic hot and cold water supply systems.*

SABS 1109-1:1990, *Pipe threads where pressure-tight joints are made on the threads – Part 1: Designation, dimensions and tolerances.*

NOTE 1 The page numbers at the top of the pages are those of the original document. Therefore, where reference is made in the text to a specific page, refer to the page number at the top of the page.

NOTE 2 The South African Bureau of Standards has adopted certain international standards and has published them as SABS IEC standards, SABS ISO standards, SABS EN standards, etc. Where reference is made in this part of SABS 60335-2 to an international standard, the reader is encouraged to investigate the possibility of using an equivalent adopted standard, should one exist. Information on currently valid national and international standards can be obtained from the South African Bureau of Standards.

Edition 1 of SABS 60335-2-21 cancels and replaces SABS IEC 60335-2-21:1989.

A vertical line in the margin indicates where IEC 60335-2-21 has been modified by a national deviation.

National annex A is for information only.