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SOUTH AFRICAN NATIONAL STANDARD

Energy efficiency of electrical and electronic apparatus

WARNING
This document references other documents normatively.

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Table of changes

Change No.	Date	Scope
Amdt 1	2014	Amended to update the scope, the referenced standards, general requirements, the methods of test, the requirements for marking of appliances, and the annex on energy efficiency labelling of electrical and electronic apparatus, and to delete the subclause on electric lamps.

Foreword

This South African standard was approved by National Committee SABS/TC 075, *Performance of electrical appliances*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in November 2014.

This document supersedes SANS 941:2012 (edition 1).

A vertical line in the margin shows where the text has been technically modified by amendment No. 1.

Reference is made in 4.1.3.2 to “national safety legislation”. In South Africa this is the National Energy Act, 2008 (Act No. 34 of 2008).

Annex A is for information only.

Introduction

In the White Paper on the Energy Policy of South Africa, published in 1998, the following was stated:

A domestic appliance labelling program will be introduced and publicity campaigns will be undertaken to ensure that appliance purchasers are aware of the purpose of the labels.

In the National Energy Efficiency Strategy for the Republic of South Africa of March 2005 (reviewed in October 2008) as published by Government Notice No. R. 580 (Government Gazette 32249) of May 2009, it was proposed that by 2015, a final energy demand reduction of 12 % should have been realized. In the residential sector, the target is a final energy demand reduction of 10 % by 2015 i.e., in principle, an average reduction of 1 % per year has to be achieved between 2005 and 2015. The strategy outlines the following interventions that need to be made in the residential sector:

a) the implementation of mandatory standards;

b) appliance labelling;

c) efficient lighting;

d) standards for non-electric appliances; and

e) public awareness.

Energy efficiency of household appliances and application of equipment efficiency standards have been shown to be of the most successful energy saving measures.

Introduction *(concluded)*

Stephen Wiel, the current President of the Board of the Collaborative Labelling and Standards Program (CLASP), said:

I envisage a future several decades from now in which virtually all countries will have implemented energy efficiency standard-setting and labelling programs. I see all test procedures, standards and labels will be so well accepted and routine as an element of the market place that their existence will be given hardly a second thought.

This document is, therefore, a necessary step taken in line with the South African government policy in an effort to comply with the stipulated energy demand reduction requirements that will render ensured, quantifiable and verifiable results. It is expected that the introduction of energy efficiency standards and labels will result in

– the elimination of inefficient appliance models on the market,

– impact on green gas emissions, and

– impact on consumers and appliance manufacturers and importers.

It was decided that information on energy efficiency should be visible on the apparatus at the time of purchase to allow buyers to make an informed choice.

The committee responsible for the development of this document decided to concentrate initially on the apparatus listed in the scope, which consume a lot of energy while in active use, and apparatus that consume small amounts of energy over long periods in passive standby mode. In cases where energy consumption ratings have not yet been defined, only power factor and stand-by power consumption have been specified.

In addition to the apparatus listed in the scope the following apparatus will be considered for later inclusion in the document: chargers for mobile phones, cameras, commercial refrigerated food display cabinets, energizers for electric fences, power supplies including UPS, security alarms, information technology equipment, vending machines, electrical storage water heaters, microwave ovens, streetlights and industrial luminaires. Interior and floodlight luminaires are not included in this standard because they are covered in SANS 475. Power tools and pumps used for short periods only have also not been included in this document.

In this document for each appliance, the test procedures and test conditions are provided. An energy efficiency label is described in an annex in the relevant referenced standards, which stipulates the required information that should appear on a label and the method of determination of the efficiency class for each appliance. An example of an energy efficiency label is included in annex A.

Contents

Energy efficiency of electrical and electronic apparatus

1 Scope

1.1 This standard covers energy efficiency requirements, measurement methods and energy efficiency labelling of the following electrical and electronic apparatus:

a) air conditioners not exceeding 7.1 kW (24 000btu/h) cooling capacity, of the wall mounted split, window and portable types and heat pumps for space heating and cooling; **Amdt 1**

b) audio and video equipment, including

1) video recording equipment, set top boxes (STBs), audio equipment and multi-function equipment for consumer use;

2) television sets that include, but are not limited to those with a cathode ray tube (CRT), liquid crystal display (LCD), a plasma display panel (PDP), or projection technologies;

c) dishwashers;

~~d) electric lamps;~~ **Amdt 1**

e) electric ovens;

f) refrigerators and freezers;

g) tumble dryers;

h) washer-dryer combinations; and

i) washing machines. **Amdt 1**

1.2 In the case of dishwashers and washing machines, water consumption is also covered.

1.3 This standard does not cover requirements for the safety of apparatus.

NOTE A typical energy efficiency label is given in annex A.