

Australian Standard[®]

**Space heating appliances—
External temperature limits and
primary guards**

This Australian Standard was prepared by Committee CS/7, Guards for Heating Appliances. It was approved on behalf of the Council of Standards Australia on 20 February 1989 and published on 10 April 1989.

The following interests are represented on Committee CS/7:

Australian Consumers Association
Australian Federation of Consumer Organizations
Australian Fire Protection Association
Australian Gas Association
Confederation of Australian Industry
Department of Business and Consumer Affairs, N.S.W.
Gas Appliance Manufacturers Association of Australia
Health Department, Vic.
Heat Electric Trade Association
National Safety Council of Australia
Royal Australasian College of Surgeons

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PREFACE

This Standard was prepared by Standards Australia's Committee on Guards for Heating Appliances, to supersede AS 2285—1979, *Guarding of domestic heating appliances for protection against fire and burn injury*.

In preparing this Standard, the committee considered the following documents:

BSI PD 6504—1983	<i>Medical information on human reaction to skin contact with hot surfaces</i>
BSI PD 6516—1987	<i>Guide to guarding fires and heating appliances</i>
AG 103	<i>Approval requirements for gas space heating appliances equipped with natural draught combustion systems</i>

This edition includes the following changes:

- (a) Clause 1.2— a new clause for referenced documents.
- (b) Clause 1.3— definitions have been clarified and expanded.
- (c) Clause 1.4— sets out a requirement for a new label.
- (d) Section 2 — a new section to clarify requirements for temperature limits.
- (e) Section 4 — performance requirements have been revised. The finger test in the 1979 edition has been deleted as it is no longer considered appropriate for a guard which is designed to prevent fabric from touching the heat source.
 - new impact tests have also been introduced for guards which include glass or similar material as part of their construction.
 - the fastening test has also been clarified where hinged guards are concerned.

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STANDARDS AUSTRALIA

Australian Standard

Space heating appliances—External temperature limits and primary guards

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard specifies temperature limits for external surfaces, excluding cooking surfaces, and requirements for the construction and fitting of primary guards for heating appliances intended for comfort space heating.

1.2 REFERENCED AND RELATED DOCUMENTS. The following documents are referred to in this Standard:

AS

3100 Approval and test specification for definitions and general requirements for electrical materials and equipment

3103 Approval and test specification—Electric room heaters

Related documents. Attention is drawn to the following related documents:

AS

1690 SAA Domestic Oil-fired Appliances Safe Design Code

1691 Domestic oil-fired appliances—Installation

BS

4086 Recommendations for maximum surface temperatures of heated domestic equipment

4876 Specification for performance requirements and test procedures for domestic flued oil burning appliances (including test procedures)

AG

103 Approval requirements for gas space heating appliances equipped with natural draught combustion systems

1.3 DEFINITIONS. For the purposes of this Standard, the definitions below apply.

1.3.1 Appliance—a fixed, mobile, or portable space-heating device including any exposed flue or similar attachment designed for the purpose of heating a room or space by the emission of heat by conduction, radiation, convection, forced air circulation, or any combination thereof, operating on electricity, gas, liquid, solid fuel, or heat transfer medium.

1.3.2 External surfaces—all surfaces of an appliance other than working surfaces. External surfaces include—

(a) handles for carrying or intended to be held for long periods while the appliance is operating;

(b) controls or handles which are touched for short periods when the appliance is operating but which are not required to be gripped; and

(c) all other external surfaces not closer than 25 mm to a working surface.

1.3.3 Heat sources—surfaces which, for the satisfactory performance of the appliance, are required to be at high temperature.

NOTE: Examples of heat sources are—

- (a) radiant elements;
- (b) burner components and flame;
- (c) radiant heat reflector(s);
- (d) heat exchangers; and
- (e) burning fuel.

1.3.4 Primary guard a guard—supplied integral with an appliance and intended to prevent direct contact with, or close approach to, heat source(s).

NOTE: A primary guard is principally intended to reduce the risk of accidental ignition of flammable materials; however, if personal contact occurs, it does not necessarily prevent accidental burning.

1.3.5 Secondary guard—a guard supplied integral with or separate from an appliance and intended to prevent deliberate or accidental contact with any surfaces which are at such a temperature as would cause thermal damage to body tissue.

NOTE: A secondary guard is for use in situations where young children or the infirm may be at risk. A child may not recognize the danger of a hot surface and could remain in contact with it for sufficient time to inflict severe tissue damage. An infirm person may fall against such a surface and be unable to move away, thus suffering severe tissue damage.

1.3.6 Working surfaces—surfaces through which heat passes to the space being heated, e.g. hot air discharge grilles, and transparent materials.

1.4 MARKING. An appliance which is fitted with a primary guard shall have a label attached which carries the following minimum information in bold capital letters not less than 3 mm in height:

THE GUARD IS FITTED TO THIS APPLIANCE TO REDUCE THE RISK OF FIRE OR INJURY FROM BURNS AND NO PART OF IT SHOULD BE PERMANENTLY REMOVED.

FOR PROTECTION OF YOUNG CHILDREN OR THE INFIRM, A SECONDARY GUARD IS REQUIRED.